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TO: Ralph J Gitomer
Location: CM-1/11D11/11B01
Art Unit: 1651
Wednesday, December 17, 2003

Case Serial Number: 10/014736

From: Mary Jane Ruhl
Location: Biotech-Chem Library
CM1-6A06
Phone: 605-1155

maryjane.ruhl@uspto.gov

Search Notes

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Technical Information Specialist
STIC
CM-1, Rm. 6-A-06
605-1155

109198

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Patent and Trademark Office

SEARCH REQUEST FORM

Requestor's Name: R Gitomer

Serial Number: 10/014,736

Date: 11/26/03

Phone: 308-0732

Art Unit: 1651

Search Topic:
Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevent citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevent claim(s).

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CPU time: ______

Total time: ______

Number of Searches: ______

Number of Databases: ______

Search Site

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____ Pre-S

Type of Search

____ N.A. Sequence

____ A.A. Sequence

____ Structure

____ Bibliographic

Vendors

____ IG

____ STN

____ Dialog

____ APS

____ Geninfo

____ SDC

____ DARC/Questel

____ Other

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=> d que stat l29
L1            1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOSTEARATE"/CN
L2            1 SEA FILE=REGISTRY ABB=ON  "HEXAGLYCERYL MONOSTEARATE"/CN
L3            1 SEA FILE=REGISTRY ABB=ON  "TETRAGLYCERYL MONOSTEARATE"/CN
L4            1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOLAURATE"/CN
L5            1 SEA FILE=REGISTRY ABB=ON  "TETRAGLYCERYL MONOLAURATE"/CN
L6            1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL DIPALMITATE"/CN
L7            1 SEA FILE=REGISTRY ABB=ON  "HEXAGLYCERYL DISTEARATE"/CN
L8            1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOOLEATE"/CN
L9            1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOMYRISTATE"/CN
L10           1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOISOSTEARATE"/CN
L11           1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL DIISOSTEARATE"/CN
L12           1 SEA FILE=REGISTRY ABB=ON  "POLYOXYETHYLENE GLYCERYL MONOSTEARAT
                E"/CN
L13           1 SEA FILE=REGISTRY ABB=ON  DECAGLYCEROL/CN
L14         402 SEA FILE=HCAPLUS ABB=ON   ?STERILIZATION?(W)(?INDICAT? OR
                ?TEST? OR ?PROCEDUR?)
L15           1 SEA FILE=HCAPLUS ABB=ON   L14 AND ?MICROORG?(W)(?SURVIV? OR
                ?KILL? OR ?LIVE? OR ?LETHAL?)
L16           1 SEA FILE=REGISTRY ABB=ON  "BACILLUS STEAROTHERMOPHILUS"/CN
L17          35 SEA FILE=HCAPLUS ABB=ON   L14 AND (?MICROORG? OR L16 OR
                ?BACILLUS?(W)?STEAROTHERMOPHILUS?)
L18          14 SEA FILE=HCAPLUS ABB=ON   L17 AND (?LETHAL? OR ?KILL? OR ?LIVE?
                OR ?SURVIV?)
L20          11 SEA FILE=REGISTRY ABB=ON  L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR
                L7 OR L8 OR L9 OR L10 OR L11
L21        4908 SEA FILE=HCAPLUS ABB=ON   L20 OR ?GLYCERYL?(W)(?STEARAT? OR
                ?POLYRICINOLAT? OR ?LAURAT? OR ?PALMITAT? OR ?OLEAT? OR
                ?MYRISTAT?)
L22           1 SEA FILE=HCAPLUS ABB=ON   L14 AND L21
L23           0 SEA FILE=HCAPLUS ABB=ON   L14 AND (L12 OR L13 OR ?GLYCERETH?(2W)
                ?DIISONONANOAT? OR ?POLYOXYETHYLEN?(2W)?GLYCERYL?(W)?STEARAT?
                OR ?DECAGLYCEROL?)
L24          15 SEA FILE=HCAPLUS ABB=ON   L15 OR L18 OR L22 OR L23
L26          16 SEA FILE=HCAPLUS ABB=ON   L14 AND ?ENZYM?
L27          31 SEA FILE=HCAPLUS ABB=ON   L24 OR L26
L28           1 SEA FILE=HCAPLUS ABB=ON   L27 AND ?MONITOR?(3A)?EFFECTIV?
L29          31 SEA FILE=HCAPLUS ABB=ON   L27 OR L28

=> d ibib abs hitrn l29 1-31

L29  ANSWER 1 OF 31  HCAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:         2003:168755  HCAPLUS
DOCUMENT NUMBER:          138:183470
TITLE:                    Novel methods and test indicators for determining the
                          effectiveness of sterilization
INVENTOR(S):              Hendricks, Judy K.; Rechsteiner, Shaundrea L.; Gorski,
                          Joel R.; Lee, Adam; Fiske, Roger
PATENT ASSIGNEE(S):       3M Innovative Properties Company, USA
SOURCE:                   U.S., 16 pp., Cont.-in-part of U.S. Ser. No. 444,830,
                          abandoned.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ----------------  ----  --------      ---------------  --------
     US 6528277         B1   20030304      US 2000-698573   20001027
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WO 2002056923 A2 20020725 WO 2001-US50888 20011025
WO 2002056923 A3 20030109
W: AU, CA, JP, KR
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR
EP 1331953 A2 20030806 EP 2001-994505 20011025
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR
PRIORITY APPLN. INFO.: US 1999-444830 B2 19991122
US 2000-698573 A 20001027
WO 2001-US50888 W 20011025

AB This invention relates to a container and method for detecting a specific environmental parameter or combination of parameters, or for determining the effectiveness of a **sterilization procedure**. The invention relates to test indicators containing controlled vols. of compressed, gas-permeable materials, and modified caps comprising one or more apertures, sterilant permeable inserts, protruding members, or a combination thereof, and to methods for using test indicators for determining the efficacy of different types of sterilization processes. If proper sterilization conditions are not met, the interactive **enzyme** system remains active, and a color product forms upon the addition of the remaining components of the **enzyme** system. If the proper sterilization conditions are met, the sterilant destroys the interactive **enzymes** and no color product is formed. Inactivation of the **enzyme** system parallels the inactivation of bacterial spores subjected to the sterilization process. Results are available in from a few seconds to a few hours. The test indicator can also be placed into a container with material such that the design simulates an environmental parameter test of the sterilization process. Diagrams describing the apparatus assembly and operation are given.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 2 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:868700 HCAPLUS
DOCUMENT NUMBER: 137:358270
TITLE: Apparatus and method of photodynamic eradication of organisms utilizing pyrrolnitrin
INVENTOR(S): Biel, Merrill A.
PATENT ASSIGNEE(S): Advanced Photodynamic Technologies, Inc., USA
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002089750	A2	20021114	WO 2002-US1576	20020118

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-263125P P 20010119

AB The invention relates to a method of photoeradication of cellular and acellular organisms including the steps of providing a photosensitive material and pyrrolnitrin in association with a cellular or acellular organism to cause a disruption of the organism. The method according to the present invention may be utilized in in vitro and in vivo treatment protocols for infections, **sterilization procedures**, cancer cell eradication, virus and fungus eradication, spore eradication, and biofilm organism eradication. Addnl. aspects of the invention include particular combinations of photosensitive materials, pyrrolnitrin, and optional surfactants for use in photodynamic therapies. Examples are provided of photodynamic eradication of Aspergillus flavus on filter material using methylene blue in combination with pyrrolnitrin, of an air filtration/decontamination device using photodynamic eradication of **microorganisms**, and of endotracheal tube sterilization.

L29 ANSWER 3 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:677247 HCAPLUS
DOCUMENT NUMBER: 138:317015
TITLE: Culture media for microbiological monitoring in isolator with residual hydrogen peroxide on surfaces and in air
AUTHOR(S): Horn, Juergen; Backes, Maria; Schepp, Eleonor-C.; Wenz, Petra
CORPORATE SOURCE: Biotest AG, USA
SOURCE: ESTECH 2002 Proceedings: Leading the Way in the Century Ahead, 48th IEST Annual Technical Meeting and 16th ICCCS International Symposium on Contamination Control, Anaheim, CA, United States, Apr. 28-May 1, 2002 (2002), 92-100. Institute of Environmental Sciences and Technology: Rolling Meadows, Ill. CODEN: 69DARZ
DOCUMENT TYPE: Conference; (computer optical disk)
LANGUAGE: English

AB Isolators after fumigating with hydrogen peroxide or peracetic acid followed by venting may, at the start of operations, still have residual hydrogen peroxide concns. between 0.3 and 6ppm in the air and between 0.5 and 3 ppm on solid surfaces. Packaged microbiol. media may withstand the fumigating procedures without damaging the fertility of the Agar, but should by examined in the actual sampling process operation as well. During air sampling an accumulation of hydrogen peroxide in the water phase of the Agar occurs leading to concns. of up to over 100 ppm in standard Tryptic Soy Casein Digest Agar, preventing the subsequent growth of any **microorganisms**. The same accumulation occurs in gelatin filters with residual water content used for air sampling. Subsequent growth of **microorganism** on gelatin filters exposed to hydrogen peroxide containing air is also not possible. Surface sampling of hydrogen peroxide exposed surfaces leads to lower recoveries of subsequently inoculated **microorganisms** or no growth in case of anaerobe spores with standard Tryptic Soy Casein Digest Agar. Only suitably modified Tryptic Soy Casein Digest Agar or stabilized D/E Agar prepns. circumvent this problem and allow uninhibited growth of ***microorganisms*** after exposure to isolator environments with actual sampling procedures. The developed gamma-sterilized Agar strips for RCS allow **effective** air **monitoring** in isolators and the corresponding Contact Slide D/E-gamma allow effective surface sampling in isolators, as demonstrated by the recovery of low inocula (< 100 cfu) of all USP test strains after air sampling or surface sampling in fumigated isolators. Even the anaerobic spore forming strain Clostridium sporogenes ATCC11437 does grow well on the modified media after hydrogen peroxide exposure. The gamma-**sterilization procedure** at 16-25 Kgray **kills**

10E8 cfu at 16 Kgray thereby ensuring a uncontaminated product.
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 4 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:555385 HCAPLUS
DOCUMENT NUMBER: 137:75521
TITLE: Indicator systems for determination of sterilization
INVENTOR(S): Hendricks, Judy K.; Rechsteiner, Shaundrea L.; Gorski, Joel R.; Lee, Adam; Fiske, Roger
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002056923	A2	20020725	WO 2001-US50888	20011025
WO 2002056923	A3	20030109		
W: AU, CA, JP, KR				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 6528277	B1	20030304	US 2000-698573	20001027
EP 1331953	A2	20030806	EP 2001-994505	20011025
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

PRIORITY APPLN. INFO.: US 2000-698573 A 20001027
US 1999-444830 B2 19991122
WO 2001-US50888 W 20011025

AB This invention relates to a container and method for detecting a specific environmental parameter or combination of parameters, or for determining the effectiveness of a **sterilization procedure**. The invention relates to test indicators containing controlled vols. of compressed, gas-permeable materials, and modified caps comprising one or more apertures, sterilant permeable inserts, protruding members, or a combination thereof, and to methods for using test indicators for determining the efficacy of different types of sterilization processes. If proper sterilization conditions are not met, the interactive **enzyme** system remains active, and a color product forms upon the addition of the remaining components of the **enzyme** system. If the proper sterilization conditions are met, the sterilant destroys the interactive **enzymes** and no color product is formed. Inactivation of the **enzyme** system parallels the inactivation of bacterial spores subjected to the sterilization process. Results are available in from a few seconds to a few hours. The test indicator can also be placed into a container with material such that the design simulates an environmental parameter test of the sterilization process.

L29 ANSWER 5 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:140679 HCAPLUS
DOCUMENT NUMBER: 136:324324
TITLE: Development of an **enzymic** time temperature integrator for sterilization processes based on Bacillus licheniformis α-amylase at reduced water content
AUTHOR(S): Guiavarc'h, Y. P.; Deli, V.; Van Loey, A. M.; Hendrickx, M. E.

CORPORATE SOURCE: Dept. of Food and Microbial Technology, Faculty of Agricultural and Applied Biological Sciences, Katholieke Universiteit te Leuven, Louvain, B3001, Belg.
SOURCE: Journal of Food Science (2002), 67(1), 285-291
CODEN: JFDSAZ; ISSN: 0022-1147
PUBLISHER: Institute of Food Technologists
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The thermal stability of Bacillus licheniformis α-amylase at low moisture content was studied, based on isothermal expts. performed in a temperature range 113 to 125°C. The thermal inactivation was monitored by measuring the decrease in thermal denaturation enthalpy and/or the decrease in **enzymic** activity on p-nitrophenyl-α-D-maltoheptaoside, or on starch as a substrate. Based on enthalpy readings, an **enzymic** system with a z-value of 10.4°C was observed when using a relative humidity of 81% at 4°C. A theor. study showed that this system could be used as a Time Temperature Integrator (TTI) to monitor the safety of sterilization processes of numerous food products.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 6 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:635926 HCAPLUS
DOCUMENT NUMBER: 135:200539
TITLE: Photodynamic cellular and acellular organism eradication utilizing a photosensitive material and surfactant
INVENTOR(S): Biel, Merrill A.
PATENT ASSIGNEE(S): Advanced Photodynamic Technologies, Inc., USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001062289	A2	20010830	WO 2001-US5718	20010223
WO 2001062289	A3	20020502		
WO 2001062289	B1	20020725		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1263465	A2	20021211	EP 2001-914446	20010223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003531828	T2	20031028	JP 2001-561353	20010223

PRIORITY APPLN. INFO.: US 2000-514070 A 20000226
US 2001-792578 A 20010223
WO 2001-US5718 W 20010223

AB The invention relates to a method of photoeradication of cellular and acellular organisms including the steps of providing a surface acting

agent in association with a cellular or acellular organism, the surface acting agent disorienting a membrane structure so that said membrane no longer functions as an effective osmotic barrier; providing a photosensitive material in association with the cellular or acellular organism; and applying light in association with the cellular or acellular organism to cause a disruption of the organism. The method according to the present invention may be utilized in in vitro and in vivo treatment protocols for infections, **sterilization procedures**, cancer cell eradication, virus and fungus eradication, spore eradication, and biofilm organism eradication. Addnl. aspects of the invention include particular combinations of photosensitive materials and surfactants for use in photodynamic therapies. Examples are provided on the use of methylene blue with SDS surfactant for photodynamic eradication of **microorganisms** in vitro, for photoeradication of oral candidiasis in immunosuppressed mice, and for biofilm **microorganism** eradication on endotracheal tubes.

L29 ANSWER 7 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:520348 HCAPLUS
DOCUMENT NUMBER: 136:245946
TITLE: Effect of γ-irradiation on serum samples on the diagnostic performance of ELISA methods for the detection of trypanosomal antibodies
AUTHOR(S): Rebeski, D. E.; Winger, E. M.; Gabler, C. M. G.; Dwinger, R. H.; Crowther, J. R.
CORPORATE SOURCE: Animal Production Unit, Agriculture and Biotechnology Laboratory, Food and Agriculture Organisation/International Atomic Energy Agency, Vienna, A-1400, Austria
SOURCE: Veterinary Parasitology (2001), 99(2), 89-104
CODEN: VPARDI; ISSN: 0304-4017
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The study investigated the effect of γ-irradiation on bovine serum samples on the ability of ELISA methods to detect trypanosomal antibodies. The serum samples were analyzed using two standardized indirect ELISA systems. Higher measurement values were observed for most γ-irradiated antibody pos. and neg. test samples. Using cut-off points, determined from the anal. of a non-irradiated trypanosomal antibody-neg. population, the γ-irradiated sera data showed that there was an increased risk of misclassifying samples as false pos. or cross-reactive due to increased anal. sensitivity and decreased anal. specificity. The intraplate precision and agreement between tested and expected values of measurements were not altered throughout. The impact on the assays' diagnostic performance was estimated by analyzing diagnostic sensitivity, diagnostic specificity and related parameters. The data demonstrated that although there was a bias of higher measurement values after γ-irradiation, this could be compensated after readjustment of the cut-off points to obtain best separation of antibody-pos. and -neg. samples. Thus, for each assay, no significant difference of the diagnostic proficiency was found before and after γ-irradiation The practical implications are discussed of a serum **sterilization procedure** using ^{60}Co γ-rays for routine sample testing, assay validation and trypanosomosis monitoring and tsetse-fly control and eradication programs.
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 8 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:126001 HCAPLUS

DOCUMENT NUMBER: 134:316025
TITLE: Effects of steam sterilization on thermogelling chitosan-based gels
AUTHOR(S): Jarry, Claire; Chaput, Cyril; Chenite, Abdellatif; Renaud, Marie-Alexandrine; Buschmann, Michael; Leroux, Jean-Christophe
CORPORATE SOURCE: Faculty of Pharmacy, University of Montreal, Montreal, QC, H3C 3J7, Can.
SOURCE: Journal of Biomedical Materials Research (2000), Volume Date 2001, 58(1), 127-135
CODEN: JBMRBG; ISSN: 0021-9304
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new thermogelling chitosan-glycerophosphate system has been recently proposed for biomedical applications such as drug and cell **delivery**. The objectives of this work were to characterize the effect of steam sterilization on the in vitro and in vivo end performances of the gel and to develop a filtration-based method to assess its sterility. Autoclaving 2% chitosan solns. for as short as 10 min resulted in a 30% decrease in mol. weight, 3-5-fold decrease in dynamic viscosity, and substantial loss of mech. properties of the resulting gel. However, sterilization did not impair the ability of the system to form a gel at 37°. The antimicrobial activity of chitosan against several **microorganisms** was evaluated after inoculation of chitosan solns. and removal of the cells by filtration. Although chitosan was bacteriostatic against the heat **sterilization bioindicator Bacillus stearothermophilus**, the bacteria could rapidly grow after separation from the chitosan solution by filtration. This indicated that B. stearothermophilus is an adequate strain to validate a heat sterilization method on chitosan prepns., and accordingly this strain was used to assess the sterility of chitosan solution after a 10-min autoclaving time.

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 9 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:772850 HCAPLUS
DOCUMENT NUMBER: 133:340295
TITLE: Biological indicators for validating a prion sterilization process
INVENTOR(S): Belhumeur, Pierre; Julien, Karine; Tabrizian, Maryam; Yahia, L'Hocine; Marchand, Richard
PATENT ASSIGNEE(S): Universite de Montreal, Can.
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000065344	A2	20001102	WO 2000-CA446	20000420
WO 2000065344	A3	20010222		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,

ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

BR 2000010007	A	20020115	BR 2000-10007	20000420
EP 1173603	A2	20020123	EP 2000-922360	20000420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002542775	T2	20021217	JP 2000-614033	20000420
NZ 514929	A	20021220	NZ 2000-514929	20000420
AU 767097	B2	20031030	AU 2000-42789	20000420
ZA 2001008328	A	20021010	ZA 2001-8328	20011010

PRIORITY APPLN. INFO.: US 1999-130945P P 19990426
WO 2000-CA446 W 20000420

AB The present invention relates to a method of evaluating the efficiency of sterilization processes by measurement of degradation levels of prion protein indicators. When exposed to sterilization conditions, prion indicators are degraded in a manner to proportionally indicate the level of degradation of prion proteins themselves on medical devices or other surfaces usable in surgery and health cares.

L29 ANSWER 10 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:521884 HCAPLUS
DOCUMENT NUMBER: 133:235356
TITLE: Enhanced attachment of Bradyrhizobium japonicum to soybean through reduced root colonization of internally seedborne **microorganisms**
AUTHOR(S): Oehrle, Nathan W.; Karr, Dale B.; Kremer, Robert J.; Emerich, David W.
CORPORATE SOURCE: Department of Biochemistry, University of Missouri-Columbia, Columbia, MO, 65211, USA
SOURCE: Canadian Journal of Microbiology (2000), 46(7), 600-606
CODEN: CJMIAZ; ISSN: 0008-4166
PUBLISHER: National Research Council of Canada
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Internally seedborne **microorganisms** are those **surviving** common surface **sterilization procedures.** Such microbes often colonize the radicle surface of a germinating soybean (Glycine max) seed, introducing an undefined parameter into studies on attachment and infection by Bradyrhizobium japonicum. Bacterial isolates from surface-sterilized soybean seed, cv. Williams 82 and cv. Maverick, were identified as Agrobacterium radiobacter, Aeromonas sp., Bacillus spp., Chryseomonas luteola, Flavimonas oryzihabitans, and Sphingomonas paucimobilis. Growth of these microbes during seed germination was reduced by treating germinating seeds with 500 μg/mL penicillin G. The effects of this antibiotic on seedling development and on B. japonicum 2143 attachment, nodulation, and nitrogen fixation are reported. Penicillin G treatment of seeds did not reduce seed germination or root tip growth, or affect seedling development. No differences in nodulation kinetics, nitrogen fixation onset or rates were observed However, the number of B. japonicum attached to treated intact seedlings was enhanced 200-325%, demonstrating that other root-colonizing bacteria can interfere with rhizobial attachment. Penicillin G treatment of soybean seedlings can be used to reduce the root colonizing microbes, which introduce an undefined parameter into studies of attachment of B. japonicum to the soybean root, without affecting plant development.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 11 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:322865 HCAPLUS
DOCUMENT NUMBER: 133:118986
TITLE: Development of a mixed mode adsorption process for the direct product sequestration of an extracellular protease from microbial batch cultures
AUTHOR(S): Hamilton, G. E.; Luechau, F.; Burton, S. C.; Lyddiatt, A.
CORPORATE SOURCE: School of Chemical Engineering, Centre for Bioprocess Engineering, Biochemical Recovery Group, University of Birmingham, Birmingham, UK
SOURCE: Journal of Biotechnology (2000), 79(2), 103-115
CODEN: JBITD4; ISSN: 0168-1656
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Direct product sequestration of extracellular proteins from microbial batch cultures can be achieved by continuous or intermittent broth recycle through an external extractive loop. Here, the development of a fluidizable, mixed mode adsorbent, designed to tolerate increasing ionic strength (synonymous with extended productive batch cultures) is described. This facilitated operations for the integrated recovery of an extracellular acid protease from cultures of Yarrowia lipolytica. Mixed mode adsorbents were prepared using chemistries containing hydrophobic and ionic groups. Matrix hydrophobicity and titration ranges were matched to the requirements of integrated protease adsorption. A single expanded bed was able to service the productive phase of growth without recourse to the pH adjustment of the broth previously required for ion exchange adsorption. This resulted in increased yields of product, accompanied by further increases in **enzyme** specific activity. A step change from pH 4.5 to 2.6, across the isoelec. point of the protease, enabled high resolution fixed bed elution induced by electrostatic repulsion. The generic application of mixed mode chemistries, which combine the phys. robustness of ion-exchange ligands in sanitization and **sterilization procedures** with a selectivity which approaches that of affinity interactions, is discussed.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 12 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:585966 HCAPLUS
DOCUMENT NUMBER: 129:186651
TITLE: New **microorganism** with resistance to hydrogen peroxide
INVENTOR(S): Kim, In-Seop; Kim, Seung-Uhn; You, Nam-Hee; Lee, Soon-Young
PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea
SOURCE: Ger. Offen., 12 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19739804	A1	19980827	DE 1997-19739804	19970910

DE 19739804	C2	19990128			
GB 2322381	A1	19980826	GB 1997-15276	19970722	
GB 2322381	B2	19990324			
CN 1191897	A	19980902	CN 1997-117346	19970808	
CN 1109751	B	20030528			
TW 422880	B	20010221	TW 1997-86115046	19971014	
US 6015706	A	20000118	US 1998-27302	19980220	
JP 10234360	A2	19980908	JP 1998-59110	19980225	

PRIORITY APPLN. INFO.: KR 1997-5704 A 19970225

AB A new **microorganism** that has a linear **survival** curve in the presence of increasing concns. of H2O2, which can be used as a standard in **sterilization procedures** using H2O2, is claimed. The organism is Micrococcus luteus HN2-11.

L29 ANSWER 13 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:300527 HCAPLUS
DOCUMENT NUMBER: 129:14193
TITLE: Unitary biological indicator for gaseous sterilants and process of making the indicator
INVENTOR(S): Imburgia, Richard
PATENT ASSIGNEE(S): Pharmaceutical Systems, Inc., USA
SOURCE: U.S., 11 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5750184	A	19980512	US 1995-574642	19951219

PRIORITY APPLN. INFO.: US 1995-574642 19951219

AB A biol. indicator is formed from two members (or a sheet with one portion folded onto another portion) which are sealed together and form a pathway having three sections. One section opens to the exterior and is preferably configured as a tortuous path. A middle pathway portion downstream of the tortuous path houses a frangible ampule. The frangible ampule contains growth medium for **microorganisms**. An interior pathway portion (most downstream from the exterior) houses a carrier inoculated with spores of a **microorganism**. The biol. indicator preferably is prepared by a process in which a thermoplastic sheet has the pathway formed by thermoforming and the sealing is by heat sealing. Unitary biol. indicators were prepared with 10 self-contained biol. indicator units in each. The assemblage was formed from sheets of PETG with a thickness of 0.020 in. The ampules contained preferred growth medium and Bromocresol Purple as a chemical indicator and the carriers had 102-108 Bacillus circulans spores. The unitary biol. indicators were used in monitoring a sterilizing apparatus and its process. The indicators were exposed to sub-**lethal** and **lethal** sterilization cycles composed of peracetic acid vapor and plasma. All samples exposed to full **lethal** sterilization conditions exhibited no growth.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 14 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:513584 HCAPLUS
DOCUMENT NUMBER: 127:146829
TITLE: Indicator systems and material compression and insertion devices for preparing same
INVENTOR(S): Hendricks, Judy K.; Biddle, Harold A.; Byerly, Dale

L.; Rechsteiner, Shaundrea L.; Gorski, Joel R.
PATENT ASSIGNEE(S): North American Science Associates, Inc., USA
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9726924	A1	19970731	WO 1997-US554	19970122
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5830683	A	19981103	US 1996-735992	19961024
AU 9718281	A1	19970820	AU 1997-18281	19970122
AU 722905	B2	20000817		
EP 879064	A1	19981125	EP 1997-903801	19970122
EP 879064	B1	20020911		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 223737	E	20020915	AT 1997-903801	19970122
ES 2183132	T3	20030316	ES 1997-903801	19970122
US 5989852	A	19991123	US 1998-184352	19981102

PRIORITY APPLN. INFO.:

US 1996-10312P	P	19960122
US 1996-25514P	P	19960905
US 1996-735992	A	19961024
US 1996-736310	A	19961024
WO 1997-US554	W	19970122

AB This invention relates to novel apparatus and methods for inserting and positioning a compressible material into a container and for using the container for detecting a specific environmental parameter or combination of parameters and for determining the effectiveness of a **sterilization procedure**. Precise positioning of a plug of compressible material in a container provides flexibility for production of indicator systems that vary in their response to sterilizing conditions. These indicators reflect the efficacy of sterilizers based on different modes of sterilization and reproducibility for accurate monitoring of each mode. The invention also relates to test indicators containing controlled vols. of compressed, gas-permeable materials and to methods for using test indicators for determining the efficacy of different types of sterilization processes. The test indicator consists of a plurality of interactive **enzymes** in a container with at least one opening. The opening is filled with a compressed cylindrical foam insert and the test indicator is placed into the sterilization chamber. The foam insert regulates the amount of sterilant such as steam, gas, chems. or plasma entering the test indicator. Upon proper sterilization, the sterilant destroys the interactive **enzymes** and no color product is formed. Inactivation of the **enzyme** system parallels the inactivation of bacterial spores subjected to the sterilization process. Results are available in from a few seconds to a few hours. The test indicator can also be placed into a container with material such that the design simulates an environmental parameter test of the sterilization process.

L29 ANSWER 15 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:494572 HCAPLUS
DOCUMENT NUMBER: 127:187691
TITLE: Amperometric lactate oxidase catheter for real-time lactate monitoring based on thin film technology
AUTHOR(S): Pfeiffer, Dorothea; Moeller, Barbara; Klimes, Norbert; Szeponik, Jan; Fischer, Sylvio
CORPORATE SOURCE: BST Bio Sensor Technologie GmbH, Berlin, 13156, Germany
SOURCE: Biosensors & Bioelectronics (1997), 12(6), 539-550
CODEN: BBIOE4; ISSN: 0956-5663
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An amperometric lactate oxidase catheter has been developed for in vivo application to real-time lactate monitoring. The electrochem. behavior of the 1+3 mm Pt-Ag/AgCl thin film electrode is not significantly influenced by lactate oxidase-polyurethane covering. Gamma-irradiation (25 kGy) is suitable for the **sterilization procedure.** The final lactate catheter is characterized by a linear concentration range between 0.5 and 20 mmol/l lactate with a sensitivity around 2 nA mmol -11-1 lactate. The accuracy is demonstrated by the measurement of control sera. Both physiol. and pathol. materials correlate well with the declared values. The dry stored lactate catheter needs about 10 min for hydration and is characterized by response times t98% of less than 2 min. Ex vivo whole blood measurements using the lactate catheter (y) give a correlation with the BIOSEN Med L (x) of y = (1.010x + 0.513) mmol/l (r = 0.9748). Lactate values obtained by continuous catheter operation ex vivo correlate well with those obtained by BIOSEN Med L. First s.c. implantation (dog) underlines the characteristics obtained ex vivo: after 30 min hydration the lactate catheter follows the lactate concentration measured ex vivo with samples from the leg vein by BIOSEN Med L.

L29 ANSWER 16 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:15187 HCAPLUS
DOCUMENT NUMBER: 126:51005
TITLE: Sterilizable paste product for topical application
INVENTOR(S): Bradford, Colin Raymond
PATENT ASSIGNEE(S): Smith and Nephew Plc, UK; Bradford, Colin Raymond
SOURCE: PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9636315	A1	19961121	WO 1996-GB1209	19960520
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
ZA 9603985	A	19961125	ZA 1996-3985	19960502
CA 2217852	AA	19961121	CA 1996-2217852	19960520
AU 9657726	A1	19961129	AU 1996-57726	19960520
AU 716244	B2	20000224		
EP 827394	A1	19980311	EP 1996-914322	19960520

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI
US 6251423 B1 20010626 US 1998-945483 19980114
PRIORITY APPLN. INFO.: GB 1995-10226 A 19950520
WO 1996-GB1209 W 19960520

AB A paste or cream formulation which can be sterilized comprises an emulsion formed of a wax or oil, an emulsifier and water and a water-insol. material which forms a gel in the presence of water. A bandage or wound dressing having the paste on a surface thereof is also disclosed. A method of making a sterilizable paste comprises forming an emulsion of oil or wax in water, forming a slurry of a gel-forming material in a polyol and then adding the slurry to the emulsion while mixing. The formulation has the creamy consistency of an emulsion and is spreadable, yet does not break down when subjected to normal **sterilization procedures**, e.g. steam sterilization. A paste was prepared containing ZnO (as an active ingredient) 10 %; NaCMC 1.7 and glycerol 10 % (in a slurry); and deionized water 42.3, glycerol 30, Cithrol GMS/AS/NA 5, and Cithrol 10 MS 1 % (in an emulsion).

L29 ANSWER 17 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:369789 HCAPLUS
DOCUMENT NUMBER: 122:170009
TITLE: Metabolic and structural changes in Pseudomonas aeruginosa, Achromobacter CDC and Agrobacterium radiobacter cells injured in parenteral fluids
AUTHOR(S): Papapetropoulou, M.; Papageorgakopoulou, N.
CORPORATE SOURCE: Medical School, University Patras, Patras, Greece
SOURCE: PDA Journal of Pharmaceutical Science and Technology (1994), 48(6), 299-303
CODEN: JPHTEU; ISSN: 1076-397X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The long term metabolic changes of three oxidase pos. microorganisms (Pseudomonas aeruginosa, Agrobacterium radiobacter and Achromobacter CDC) all isolated from aquatic environment, were defined after they were inoculated in three parenteral fluids: Lactated Ringer's solution, Sodium Chloride 0.9% and Dextrose 5%. The number of microorganisms introduced into the parenteral products was adjusted to 105 bacteria / mL and left at room temperature (20-22°C) for 30 days. Their **enzymic** and protein profile as compared with their initial characteristics after they were grown in broth, were measured using API 20NE batteries of tests and gel electrophoresis. In L-R and NaCl 0.9% fluids, P. aeruginosa and Ag. radiobacter lost the ability to hydrolyze urea while Ac CDC retained this ability. In Dextrose 5% fluid the microorganisms lost most of their metabolic characters. The protein patterns in SDS-PAGE of samples prepared from cells of the tested microorganisms showed marked differences (in P. aeruginosa) to minor differences (in Ag. radiobacter and Ac CDC) while new proteins with Mr > 66KDa revealed Ag. radiobacter cells. The gelatinolytic zymogram shows also differences between bacterial cells grown in nutrient broth and those that remained in parenteral fluids. These changes reflect the stress of the tested bacteria in an unfavorable condition. The alterations of injured bacteria could render them unable to grow on routine, for **sterilization testing**, culture media.

L29 ANSWER 18 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:212962 HCAPLUS
DOCUMENT NUMBER: 116:212962
TITLE: The influence of storage stability on the use of carob pulp aqueous extract as raw material for fermentation processes

AUTHOR(S): Roseiro, J. Carlos; Girio, Francisco; Amaral-Collaco, M. T.
CORPORATE SOURCE: Dep. Tecnol. Ind. Alimen., Lab. Nac. Eng. Technol. Ind., Lisbon, 1900, Port.
SOURCE: Lebensmittel-Wissenschaft und -Technologie (1991), 24(6), 508-12
CODEN: LBWTAP; ISSN: 0023-6438
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Aqueous exts. of carob pulp are biochem. unstable. Syrups submitted to 2 different **sterilization procedures** were subsequently stored at 4°. Syrup sterilized by microfiltration showed a very rapid inversion of sucrose and the initial 3.0 mM isobutyric acid, responsible for acid toxicity to biol. systems, doubled to 6 mM in the 1st 20 days. Heat-treated syrup remained unchanged during the period of study. An **enzymic** anal. showed that the carob exts. exhibited invertase and esterase sp. activities of 369 and 221 U/mg, resp. Because the inversion of sucrose was faster than acid formation, it was possible to obtain a fermentable syrup with maximum fructose and glucose and low isobutyric acid content by heating the extract within the 1st 5 days after production

L29 ANSWER 19 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:58284 HCAPLUS
DOCUMENT NUMBER: 114:58284
TITLE: Characteristics of a new bioindicator and the testing of thermal disinfection methods
AUTHOR(S): Senkpiel, Klaus; Hoffmann, Henning; Kantelberg, Ulrike; Ohgke, Helge; Beckert, Johannes
CORPORATE SOURCE: Inst. Hyg., Med. Univ. Luebeck, Luebeck, D-2400, Germany
SOURCE: Zentralblatt fuer Hygiene und Umweltmedizin (1990), 190(3), 275-92
CODEN: ZHUMEO; ISSN: 0934-8859
DOCUMENT TYPE: Journal
LANGUAGE: German
AB The suitability of a thermostable metalloproteinase isolated from Bacillus thermoproteolyticus, thermolysin (E.C. 3.4.24.4), for application as a bioindicator for testing the effectiveness of hospital thermal disinfection methods (medical instruments, mattresses) was established. Various parameters such as optimal temperature (75°) and pH (8.0), specific activity following immobilization on filter paper (24.588 μmol/(mg·min·L)), Michaelis constant (5.63 + 10-3M, and Vmax (129.9 μmol/L), were determined after which its thermal deactivation kinetics was measured for temps. of 75-93° and exposition times of 3-20 min. The immobilized **enzyme** was sealed in a polypropylene/polyester foil and compared with conventional phys. and microbiol. **sterilization test** methods, whereby variability coeffs. of 12-29% compared to the other methods was seen. The bioindicator was stable <12 wks. at room temperature

L29 ANSWER 20 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:439365 HCAPLUS
DOCUMENT NUMBER: 113:39365
TITLE: Soil sterilization methods to show VA-mycorrhizae aid phosphorus and zinc nutrition of wheat in Vertisols
AUTHOR(S): Thompson, J. P.
CORPORATE SOURCE: Plant Pathol. Branch, Queensland Wheat Res. Inst., Toowoomba, 4350, Australia
SOURCE: Soil Biology & Biochemistry (1990), 22(2), 229-40

CODEN: SBIOAH; ISSN: 0038-0717
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Methods to partially sterilize soil to **kill** vesicular-arbuscular mycorrhizal (VAM) fungi to show the value of VAM to P and Zn nutrition of wheat in vertisols were assessed. At anthesis, mycorrhizal wheat in sterilized soil reinoculated with VAM propagules had 3 times the P and Zn concns. and uptake of nonmycorrhizal wheat. Mycorrhizal wheat yielded up to 37% more grain than nonmycorrhizal wheat. VAM improved recovery of Zn from both soil and fertilizer sources. Multiple regression anal. showed plant P concentration was pos. related to VAM colonization level and to P fertilizer application, and plant Zn concentration was pos. related to VAM colonization level and to Zn fertilizer, but neg. related to P fertilizer. In unsterilized soil, mycorrhizal colonization was decreased by P fertilizer at 50 mg kg-1, but not by Zn at 15 mg kg-1. γ-Radiation at 5, 7.5, 10, or 20 kGy, aerated steam for 30 min at 60, 70, or 80°, but not at 50°, and methyl-bromide fumigation effectively **killed** VAM propagules in the soil. Effective VAM colonization was reestablished in all soil sterilization treatments by inoculating with VAM spores and colonized root pieces. The pathogenic fungus Fusarium graminearum **survived** γ-irradiation to 10 kGy, possibly because of its pink pigmentation. Methyl-bromide fumigation resulted in high Br concns. in the wheat tissue and phytotoxicity symptoms. Partial sterilization with γ-radiation of 5-20 kGy, aerated steam of 60-80°, and methyl-bromide fumigation increased net mineralization (NH4+ + NO3-) of organic N on incubation. Nitrification was inhibited by 20 kGy of γ-radiation, aerated steam at 70 or 80°, and methyl-bromide. Soil pH was decreased by as much as 0.4 units where the addnl. mineral N nitrified to NO3- in comparison to where it remained as NH4+. Extractable P after incubation was increased by 20 kGy of γ-irradiation and by aerated steam at 60-80°. Respiration, assessed by CO2 evolution, was decreased by γ-irradiation of 5-10 kGy, probably due to elimination of a fungal population capable of decomposing plant residues. Narrow C-to-N ratios (5-6) of net mineralization during incubation indicated decomposition of microbial biomass **killed** by all partial sterilization treatments, except aerated steam at 50°. Comparison of VAM-inoculated and uninoculated plants in soil partially sterilized with aerated steam at 60-70° or γ-irradiation at 10k Gy (for soil without F. graminearum) or 20 kGy is recommended for future nutritional studies with VAM in vertisols.

L29 ANSWER 21 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1987:125934 HCAPLUS
DOCUMENT NUMBER: 106:125934
TITLE: Hydrogen peroxide plasma sterilization system
INVENTOR(S): Jacobs, Paul Taylor; Lin, Szu Min
PATENT ASSIGNEE(S): Surgikos, Inc., USA
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 207417	A1	19870107	EP 1986-108519	19860620
EP 207417	B1	19900926		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
US 4643876	A	19870217	US 1985-747209	19850621

IN 163670	A	19881029	IN 1986-CA442		19860613
AU 8659112	A1	19861224	AU 1986-59112		19860619
AU 592576	B2	19900118			
ES 556298	A1	19870416	ES 1986-556298		19860619
JP 61293465	A2	19861224	JP 1986-143087		19860620
JP 02062261	B4	19901225			
BR 8602867	A	19870210	BR 1986-2867		19860620
ZA 8604630	A	19880224	ZA 1986-4630		19860620
CA 1264217	A1	19900109	CA 1986-512072		19860620
AT 56881	E	19901015	AT 1986-108519		19860620
IN 168896	A	19910706	IN 1988-CA14		19880106
JP 01293871	A2	19891127	JP 1988-122156		19880520
IN 172875	A	19931225	IN 1990-CA878		19901016
PRIORITY APPLN. INFO.:			US 1985-747209	A	19850621
			EP 1986-108519	A	19860620
			IN 1988-CA14	A1	19880106

AB The sterilization of articles such as medical instruments in gaseous plasmas employs H2O2 vapor as the precursor for the reactive species generated during the plasma generation cycle to **kill** the **microorganisms** and employs a pretreatment cycle prior to the plasma generation cycle. A **sterilization test** was performed at 150 W of pulsed plasma in a cycle of 0.5 ms plasma on, 1.0 ms plasma off for 15 min. The test employed a 10 min pretreatment cycle with H2O2 at 0.208 mg/L at 1.5 Torr pressure. The system showed 100% sporicidal activity. More tests to determination appropriate sterilization conditions were detailed.

L29 ANSWER 22 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:	1986:441207 HCAPLUS
DOCUMENT NUMBER:	105:41207
TITLE:	Conversion into acetone and butanol of lignocellulosic substrates pretreated by steam explosion
AUTHOR(S):	Marchal, R.; Ropars, M.; Vandecasteele, J. P.
CORPORATE SOURCE:	Inst. Francais du Petrole, Rueil-Malmaison, 92506, Fr.
SOURCE:	Biotechnology Letters (1986), 8(5), 365-70 CODEN: BILED3; ISSN: 0141-5492
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB Hydrolyzates obtained by **enzymic** saccharification of wheat straw or corn stover pretreated by steam explosion under classical or acidic conditions, were nonfementable into Me2CO [67-64-1]-BuOH [71-36-3]. A simple treatment involving heating the hydrolyzates in the presence of Ca or Mg compds. such as Ca(OH)2 or MgCO3 at neutral pH values restored normal fermentability to these hydrolyzates. The detoxification treatment could be included in the standard neutralization and **sterilization procedures** performed before fermentation

L29 ANSWER 23 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:	1984:474652 HCAPLUS
DOCUMENT NUMBER:	101:74652
TITLE:	Impregnation of papers with low wet tear strength
INVENTOR(S):	Thiere, Uwe; Mueller, Wolfgang; Richter, Hans Bodo; Sturm, Guenter; Weber, Johannes
PATENT ASSIGNEE(S):	Ger. Dem. Rep.
SOURCE:	Ger. (East), 5 pp. CODEN: GEXXA8
DOCUMENT TYPE:	Patent
LANGUAGE:	German
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 206572	A1	19840201	DD 1981-234833	19811113

PRIORITY APPLN. INFO.: DD 1981-234833 19811113

AB A process for impregnation of paper with low wet impact strength, i.e. chromatog. paper, with leuco dyes, spore suspensions, **enzyme**, or sugar solns. gave products for use as indicator in chemical or biochem. testings was described. Thus, chromatog. paper was impregnated with o-toluidine hydrochloride [636-21-5] solution on a support and dried at .apprx.120° (surface temperature maximum 50°) to give a specimen for use in identification of small amts. of blood in biol. material.

L29 ANSWER 24 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1982:578307 HCAPLUS
DOCUMENT NUMBER: 97:178307
TITLE: Evaluation of parameters affecting the yield, viability and cell division of Pinus pinaster protoplasts
AUTHOR(S): David, H.; David, A.; Mateille, T.
CORPORATE SOURCE: Lab. Biol. Physiol. Veg., Univ. Bordeaux I, Talence, 33405, Fr.
SOURCE: Physiologia Plantarum (1982), 56(1), 108-13
CODEN: PHPLAI; ISSN: 0031-9317
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Various factors affecting the yield and viability of P. pinaster Ait. cotyledon protoplasts and the mitotic activity of regenerate cells are described. A study of the effect of **sterilization procedures** of the plant material showed that whereas the organs collected from disinfected seedlings allow for good yield and viability of isolated protoplasts, germination under nonsterile conditions favors a greater germinating capacity and stronger mitotic activity. Numerous clusters of 10-15 cells were formed after 20 days of culture when a 5% aqueous solution of Ca hypochlorite was used as a sterilizing agent. The effects of an addnl. purification of the **enzymes** showed that although yield and viability of the protoplasts are only slightly improved, the more highly purified **enzymes** enhanced the mitotic activity markedly. Between the 2 total **enzyme** concns. used (0.2 and 0.4%, and in which the relative ratio of each element was unchanged), only the lowest level supplied a debris-free protoplast suspension; mitotic activity occurred only in that case. Comparison of the populations of cotyledon protoplasts collected from seedlings at 2 different growth stages (not fully developed or fully expanded cotyledons) did not reveal any appreciable differences in their size distribution. Neither was the extent of cellular viability affected by the degree of cell differentiation at the time of collecting. On the other hand, the yield of protoplasts and the mitotic activity of the regenerated cells were greater when partially developed organs were used. Moreover, a pretreatment of the elongating cotyledons with a mineral (half-strength Murashigeskoog macronutrients and full-strength micronutrients) and hormonal (15 μM BAP, 0.5 μM NAA) solution improved cell division frequency.

L29 ANSWER 25 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1977:195190 HCAPLUS
DOCUMENT NUMBER: 86:195190
TITLE: Biological indicators: study of the resistance relation between **Bacillus stearothermophilus** and B. subtilis and B.

pumilus
AUTHOR(S): Lena, P.; Baschieri, F.; Baldini, L.; Rossettini, M.
CORPORATE SOURCE: Lab. Controllo Qual., Pierrel S.p.A., Sondalo, Italy
SOURCE: Farmaco, Edizione Pratica (1977), 32(4), 172-9
CODEN: FRPPAO; ISSN: 0430-0912
DOCUMENT TYPE: Journal
LANGUAGE: Italian
AB B. stearothermophilus was more resistant than B. subtilis and B. pumilus to steam sterilization but was somewhat less resistant to sterilization by ethylene oxide [75-21-8] and γ-irradiation Even in these cases, however, its resistance surpassed the requirements for a biol. indicator of sterilization. Because it is nonpathogenic, nontoxigenic, nonpyrogenic, and not a common laboratory contaminant and has adequate resistance, B. stearothermophilus is proposed for use as a general biol. indicator in the above 3 sterilization methods (death of the indicator organism during the sterilization implies that any contaminating **microorganisms** must also have been **killed**).

L29 ANSWER 26 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1976:492571 HCAPLUS
DOCUMENT NUMBER: 85:92571
TITLE: Effects of feeding protein, recovered from industrial waste water ("Alwa-protein"), to growing pigs
AUTHOR(S): Farstad, Leidulf; Krogstad, Ola; Liven, Eivind; Flatlandsmo, Knut; Naess, Bjoern
CORPORATE SOURCE: Dep. Microbiol. Immunol., Vet. Coll. Norway, Oslo, Norway
SOURCE: Acta Agriculturae Scandinavica (1976), 26(2), 119-29
CODEN: AASCAU; ISSN: 0001-5121
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The suitability and nutritional adequacy of feeding lignosulfonate precipitated proteins from industrial waste waters (Alwa-protein) as a substitute for soybean meal have been studied in growing pigs. Soybean meal (50%) in the control ration could be replaced by Alwa-protein without any significant neg. effects on weight gain, feed efficiency or carcass quality. When Alwa-protein was given in higher concns., a significantly lower weight gain, poorer carcass quality, and other neg. effects on various biol. systems were observed No significant differences, attributable to the diets, were seen for the various groups on macroscopic and histol. examination of different parenchymatous organs. Blood analyses revealed some significant differences between the control group and exptl. groups for the biol. parameters tested. Bacteriol. examination of the Alwa-protein, led to the isolation of Salmonella anatum, indicating either inadequate **sterilization procedures** or recontamination during storage or transportation. Bacteriol. and **enzymol.** examns. of intestinal content revealed no marked differences between the groups.

L29 ANSWER 27 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1975:70113 HCAPLUS
DOCUMENT NUMBER: 82:70113
TITLE: Indicator for effectiveness of ethylene oxide sterilization
INVENTOR(S): Gunther, Donald A.
PATENT ASSIGNEE(S): American Sterilizer Co.
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3852034	A	19741203	US 1972-264746	19720621
CA 992856	A1	19760713	CA 1973-171937	19730522

PRIORITY APPLN. INFO.: US 1972-264746 19720621

AB A chemical indicator is used in an (CH2)2O sterilizer to signal whether or not sterilization has been effective. The indicator changes color if the sterilization has been effective; it consists of a carrier bearing amino-substituted indicating compound which undergoes color change when amino group H is replaced by hydroxyethyl (the degree of color change depends on the extent of the replacement reaction) and a buffering agent to provide amino group dissociation equilibrium such that readily visible color change indicates sterilizing effectiveness. The indicators are acid salts of amino-substituted triphenylmethanes, diphenylmethanes, azines, and xanthenes. Thus, an aqueous solution of 0.1% pararosaniline.HCl and an aqueous buffer solution containing 0.5% each of Na borate and H3BO3, pH 8.5, are prepared; 0.01 ml of each solution is placed on a 0.5 in. diameter filter paper sensitivity disk using a pipet. The indicator is air dried for 4 hr; it changes color from red to blue under conditions of (CH2)2O sterilization at the time all **microorganisms** have been **killed**. By substituting a buffer of Na borate only (pH 9.2), a faster color change occurs as compared to the above indicator under any set of sterilizing conditions. A slower color change is obtained by substituting a citric acid/phosphate buffer (pH 7.8) and a still slower change occurs using a mixed phosphate buffer, pH 6.9. Other color indicators such as doebners violet, the nonalkylated precursor of malachite green, the nonalkylated precursor of auramine O, safranine T, thionine, the nonalkylated precursor of rhodamine B, and rosaniline.HCl may be used in place of the pararosaniline.HCl.

L29 ANSWER 28 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1974:503385 HCAPLUS
DOCUMENT NUMBER: 81:103385
TITLE: Heat inactivation of the lipase and other carboxyl ester hydrolases in preserved products that are rich in fat
AUTHOR(S): Hottenroth, Beatrix
CORPORATE SOURCE: Inst. Lebensmitteltechnol. Verpack., Tech. Univ. Muenchen, Munich, Fed. Rep. Ger.
SOURCE: Fleischwirtschaft (1974), 54(6), 1071-4, 1077
CODEN: FLEIA8; ISSN: 0015-363X
DOCUMENT TYPE: Journal
LANGUAGE: German

AB **Sterilization tests** with canned pork and pork fat showed that the lipase of the product and its accompanying carboxyl ester hydrolases could be stabilized to some extent by fat, but they did not survive the usual harsh conditions of sterilization even in very fatty foods.

L29 ANSWER 29 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1970:484920 HCAPLUS
DOCUMENT NUMBER: 73:84920
TITLE: Ethylene oxide resistance of **microorganisms** in dust compared with the resistance of Bacillus subtilis spores
AUTHOR(S): Kristensen, Hanne
CORPORATE SOURCE: Contr. Dep., Statens Seruminst., Copenhagen, Den.

SOURCE: Acta Pathologica et Microbiologica Scandinavica, Section B: Microbiology and Immunology (1970), 78(3), 298-304
CODEN: APMIBM; ISSN: 0365-5563
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The resistance of standardized spore prepns. of B. stearothermophilus and B. subtilis to industrial ethylene oxide (I) **sterilization procedures** was compared. The resistance of the most resistant preparation was compared with that of **microorganisms** in dust and dirt. The expts. demonstrated the importance of water content to the I resistance of test pieces intended for control of the microbiol. effect of **sterilization procedures. Microorganisms** in dust and dirt may possess a I resistance in the same range as that possessed by B. subtilis spores in vacuum-dried routine test pieces. Inactivation curves representing the B. subtilis strain and some of the **microorganisms surviving** the industrial **sterilization procedures** revealed that the decisive factor in the inactivation was the water content inside the **microorganisms** or in their immediate vicinity.

L29 ANSWER 30 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1967:507658 HCAPLUS
DOCUMENT NUMBER: 67:107658
TITLE: Combating **microorganisms** with unsubstituted or bromo-substituted cyclobutanone
INVENTOR(S): Pierce, Arleen C.
PATENT ASSIGNEE(S): Allied Chemical Corp.
SOURCE: U.S., 2 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3336187		19670815	US	19660825

AB Cyclobutanone or α-bromocyclobutanone was used in vapor phase **sterilization tests.** All Staphylococcus aureus cells were **killed** by a 24-hr. exposure to cyclobutanone at 80° and 90% relative humidity, or by exposure to α-bromocyclobutanone at 80° and 50% relative humidity.

L29 ANSWER 31 OF 31 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1956:7454 HCAPLUS
DOCUMENT NUMBER: 50:7454
ORIGINAL REFERENCE NO.: 50:1479i,1480a
TITLE: Cold sterilization of foods
AUTHOR(S): Proctor, B. E.; Goldblith, S. A.
CORPORATE SOURCE: Massachusetts Inst. of Technol., Cambridge
SOURCE: Chemical Engineering Progress (1955), 51, 480-2
CODEN: CEPRA8; ISSN: 0360-7275
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB It has been possible to demonstrate the ability of radiations to destroy all types of **microorganisms** in every conceivable type of package, so long as the dimensions of the package do not exceed the limitations imposed by the particular type and energy level of radiations used. The species of organism is the prime factor in determining the magnitude

of the sterilizing dose. Environmental factors are important in the **survival** ratios of **microorganisms** exposed to ionizing radiations. Microbiol. factors involved in radiation **sterilization indicate** the hazards in applying any one set formula for the use of ionizing radiations to destroy all species of **microorganisms** that can contaminate a food. They also demonstrate the necessity of time-consuming, tedious research under the particular exptl. conditions to be encountered in processing with each particular contaminating species.

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=> d que stat l35
L1             1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOSTEARATE"/CN
L2             1 SEA FILE=REGISTRY ABB=ON  "HEXAGLYCERYL MONOSTEARATE"/CN
L3             1 SEA FILE=REGISTRY ABB=ON  "TETRAGLYCERYL MONOSTEARATE"/CN
L4             1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOLAURATE"/CN
L5             1 SEA FILE=REGISTRY ABB=ON  "TETRAGLYCERYL MONOLAURATE"/CN
L6             1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL DIPALMITATE"/CN
L7             1 SEA FILE=REGISTRY ABB=ON  "HEXAGLYCERYL DISTEARATE"/CN
L8             1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOOLEATE"/CN
L9             1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOMYRISTATE"/CN
L10            1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL MONOISOSTEARATE"/CN
L11            1 SEA FILE=REGISTRY ABB=ON  "DECAGLYCERYL DIISOSTEARATE"/CN
L12            1 SEA FILE=REGISTRY ABB=ON  "POLYOXYETHYLENE GLYCERYL MONOSTEARAT
                 E"/CN
L13            1 SEA FILE=REGISTRY ABB=ON  DECAGLYCEROL/CN
L14          402 SEA FILE=HCAPLUS ABB=ON  ?STERILIZATION?(W)(?INDICAT? OR
                 ?TEST? OR ?PROCEDUR?)
L15            1 SEA FILE=HCAPLUS ABB=ON  L14 AND ?MICROORG?(W)(?SURVIV? OR
                 ?KILL? OR ?LIVE? OR ?LETHAL?)
L16            1 SEA FILE=REGISTRY ABB=ON  "BACILLUS STEAROTHERMOPHILUS"/CN
L17           35 SEA FILE=HCAPLUS ABB=ON  L14 AND (?MICROORG? OR L16 OR
                 ?BACILLUS?(W)?STEAROTHERMOPHILUS?)
L18           14 SEA FILE=HCAPLUS ABB=ON  L17 AND (?LETHAL? OR ?KILL? OR ?LIVE?
                 OR ?SURVIV?)
L20           11 SEA FILE=REGISTRY ABB=ON  L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR
                 L7 OR L8 OR L9 OR L10 OR L11
L21         4908 SEA FILE=HCAPLUS ABB=ON  L20 OR ?GLYCERYL?(W)(?STEARAT? OR
                 ?POLYRICINOLAT? OR ?LAURAT? OR ?PALMITAT? OR ?OLEAT? OR
                 ?MYRISTAT?)
L22            1 SEA FILE=HCAPLUS ABB=ON  L14 AND L21
L23            0 SEA FILE=HCAPLUS ABB=ON  L14 AND (L12 OR L13 OR ?GLYCERETH?(2W)
                 ?DIISONONANOAT? OR ?POLYOXYETHYLEN?(2W)?GLYCERYL?(W)?STEARAT?
                 OR ?DECAGLYCEROL?)
L24           15 SEA FILE=HCAPLUS ABB=ON  L15 OR L18 OR L22 OR L23
L26           16 SEA FILE=HCAPLUS ABB=ON  L14 AND ?ENZYM?
L27           31 SEA FILE=HCAPLUS ABB=ON  L24 OR L26
L28            1 SEA FILE=HCAPLUS ABB=ON  L27 AND ?MONITOR?(3A)?EFFECTIV?
L29           31 SEA FILE=HCAPLUS ABB=ON  L27 OR L28
L30           64 SEA L29
L31           46 DUP REMOV L30 (18 DUPLICATES REMOVED)
L34            1 SEA L31 AND GLYCEROL?
L35           46 SEA L31 OR L34

=> d ibib abs l35 1-46
L35  ANSWER 1 OF 46     MEDLINE on STN
ACCESSION NUMBER:   2001314847     MEDLINE
DOCUMENT NUMBER:    21277124   PubMed ID: 11388233
TITLE:              Effect of human immunoglobulins on the immunogenicity of
                    porcine bioprostheses.
AUTHOR:             Schussler O; Shen M; Shen L; Carpentier S M; Kaveri S;
                    Carpentier A
CORPORATE SOURCE:   Laboratoire d'Etude des Greffes et Prostheses Cardiaques,
                    Universite de Paris VI, France.. labo.legpc@brs.ap-hop-
                    paris.fr
SOURCE:             ANNALS OF THORACIC SURGERY, (2001 May) 71 (5 Suppl)
                    S396-400.
                    Journal code: 15030100R. ISSN: 0003-4975.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
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FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200106
ENTRY DATE: Entered STN: 20010618
Last Updated on STN: 20010814
Entered Medline: 20010614

AB BACKGROUND: Glutaraldehyde fixation (GT) is known to reduce immunologic reactions and tissue degeneration after implantation in humans. Sterilization after glutaraldehyde fixation (G-ST) improves the safety and reduces the tendency of GT valves to calcify. Intravenous immunoglobulins (IVIg) have been shown to reduce xenogeneic response against porcine tissue. We have investigated the effect of these fixation procedures combined with and without IVIg on the antigenicity of bioprostheses. METHODS: Lewis adult rats were implanted subcutaneously with a fresh, GT, or G-ST porcine heart valve pre- or posttreated with different amounts of IVIg. We followed by **enzyme**-linked immunosorbent assay and IgM and IgG titers against protein extracts from the porcine heart valves after implantation. Cellular reactivity was assessed in xenogeneic lymphoendothelial coculture experiments. Calcification content was also examined. RESULTS: Glutaraldehyde fixation partially decreased the humoral response against proteins of the implant but elicited a cellular xenogeneic response. Sterilization reduced these reactivities, but retained antigenicity. Intravenous immunoglobulin postincubated with GT valves before implantation reduced the antigenicity of the tissue to the same extent as G-ST valves, but had no effect on valvular tissue calcification. CONCLUSIONS: Our studies demonstrate that IVIg or the **sterilization procedure** (ST) reduced the cellular response against glutaraldehyde-fixed valves (GT), whereas reduced calcification was observed only with ST.

L35 ANSWER 2 OF 46 MEDLINE on STN
ACCESSION NUMBER: 2001268358 MEDLINE
DOCUMENT NUMBER: 21067935 PubMed ID: 11153009
TITLE: Effects of steam sterilization on thermogelling chitosan-based gels.
AUTHOR: Jarry C; Chaput C; Chenite A; Renaud M A; Buschmann M; Leroux J C
CORPORATE SOURCE: Faculty of Pharmacy, University of Montreal, C.P. 6128 succ. centre-ville, Montreal, Qc, H3C 3J7, Canada.
SOURCE: JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (2001) 58 (1) 127-35.
Journal code: 0112726. ISSN: 0021-9304.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010529
Last Updated on STN: 20010529
Entered Medline: 20010521

AB A new thermogelling chitosan-glycerophosphate system has been recently proposed for biomedical applications such as drug and cell **delivery**. The objectives of this work were to characterize the effect of steam sterilization on the in vitro and in vivo end performances of the gel and to develop a filtration-based method to assess its sterility. Autoclaving 2% (w/v) chitosan solutions for as short as 10 min resulted in a 30% decrease in molecular weight, 3-5-fold decrease in dynamic viscosity, and substantial loss of mechanical properties of the resulting gel. However, sterilization did not impair the ability of the system to form a gel at 37 degrees C. The antimicrobial activity of chitosan against several **microorganisms** was evaluated after

inoculation of chitosan solutions and removal of the cells by filtration. It was found that, although chitosan was bacteriostatic against the heat **sterilization bioindicator Bacillus stearothermophilus**, the bacteria could rapidly grow after separation from the chitosan solution by filtration. This indicated that B. stearothermophilus is an adequate strain to validate a heat sterilization method on chitosan preparations, and accordingly this strain was used to assess the sterility of chitosan solution following a 10 min autoclaving time.

L35 ANSWER 3 OF 46 MEDLINE on STN
ACCESSION NUMBER: 2001044928 MEDLINE
DOCUMENT NUMBER: 20387724 PubMed ID: 10932352
TITLE: Enhanced attachment of Bradyrhizobium japonicum to soybean through reduced root colonization of internally seedborne **microorganisms.**
AUTHOR: Oehrle N W; Karr D B; Kremer R J; Emerich D W
CORPORATE SOURCE: University of Missouri-Columbia, Department of Biochemistry 65211, USA.. emerichd@missouri.edu
SOURCE: CANADIAN JOURNAL OF MICROBIOLOGY, (2000 Jul) 46 (7) 600-6. Journal code: 0372707. ISSN: 0008-4166.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200012
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001201

AB Internally seedborne **microorganisms** are those **surviving** common surface **sterilization procedures.** Such microbes often colonize the radicle surface of a germinating soybean (Glycine max) seed, introducing an undefined parameter into studies on attachment and infection by Bradyrhizobium japonicum. Bacterial isolates from surface-sterilized soybean seed, cv. Williams 82 and cv. Maverick, used in our studies, were identified as Agrobacterium radiobacter, Aeromonas sp., Bacillus spp., Chryseomonas luteola, Flavimonas oryzihabitans, and Sphingomonas paucimobilis. Growth of these microbes during seed germination was reduced by treating germinating seeds with 500 micrograms/mL penicillin G. The effects of this antibiotic on seedling development and on B. japonicum 2143 attachment, nodulation, and nitrogen fixation are reported here. Penicillin G treatment of seeds did not reduce seed germination or root tip growth, or affect seedling development. No differences in nodulation kinetics, nitrogen fixation onset or rates were observed. However, the number of B. japonicum attached to treated intact seedlings was enhanced 200-325%, demonstrating that other root-colonizing bacteria can interfere with rhizobial attachment. Penicillin G treatment of soybean seedlings can be used to reduce the root colonizing microbes, which introduce an undefined parameter into studies of attachment of B. japonicum to the soybean root, without affecting plant development.

L35 ANSWER 4 OF 46 MEDLINE on STN
ACCESSION NUMBER: 97120503 MEDLINE
DOCUMENT NUMBER: 97120503 PubMed ID: 8961174
TITLE: The effect of gamma-irradiation on the antibacterial activity of honey.
AUTHOR: Molan P C; Allen K L
CORPORATE SOURCE: Department of Biological Sciences, University of Waikato,

Hamilton, New Zealand.
SOURCE: JOURNAL OF PHARMACY AND PHARMACOLOGY, (1996 Nov) 48 (11) 1206-9.
Journal code: 0376363. ISSN: 0022-3573.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199703
ENTRY DATE: Entered STN: 19970321
Last Updated on STN: 19970321
Entered Medline: 19970313

AB There is increasing usage of honey as a dressing on infected wounds, burns and ulcers, but there is some concern that there may be a risk of wound botulism from the clostridial spores sometimes found in honey. It is well-established that the antibacterial activity is heat-labile so would be destroyed if honey were sterilized by autoclaving, but the effect of gamma-irradiation on the antibacterial activity of honey is not known. Therefore an investigation was carried out to assess the effect on the antibacterial activity of honey when the honey was subjected to a commercial **sterilization procedure** using gamma-irradiation (25 kGy). Two honeys with antibacterial activity due to **enzymically**-generated hydrogen peroxide and three manuka honeys with non-peroxide antibacterial activity were investigated. The honeys were tested against Staphylococcus aureus in an agar well diffusion assay. There was no significant change found in either type of antibacterial activity resulting from this form of sterilization of honey, even when the radiation was doubled (to 50 kGy). Testing of honey seeded with spores of Clostridium perfringens and C. tetani (10000 and 1000 spores g-1 of honey, respectively) showed that 25 kGy of gamma-irradiation was sufficient to achieve sterility.

L35 ANSWER 5 OF 46 MEDLINE on STN
ACCESSION NUMBER: 95153307 MEDLINE
DOCUMENT NUMBER: 95153307 PubMed ID: 7850451
TITLE: Metabolic and structural changes in Pseudomonas aeruginosa, Achromobacter CDC and Agrobacterium radiobacter cells injured in parenteral fluids.
AUTHOR: Papapetropoulou M; Papageorgakopoulou N
CORPORATE SOURCE: Public Health Department-Environmental Microbiology Division, Medical School, University of Patras, Greece.
SOURCE: PDA JOURNAL OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY, (1994 Nov-Dec) 48 (6) 299-303.
Journal code: 9439538. ISSN: 1079-7440.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199503
ENTRY DATE: Entered STN: 19950322
Last Updated on STN: 19960708
Entered Medline: 19950315

AB The long term metabolic changes of three oxidase positive microorganisms (Pseudomonas aeruginosa, Agrobacterium radiobacter and Achromobacter CDC) all isolated from aquatic environment, were defined after they were inoculated in three parenteral fluids: Lactated Ringer's solution, Sodium Chloride 0.9% and Dextrose 5%. The number of microorganisms introduced into the parenteral products was adjusted to 10(5) bacteria/ml and left at room temperature (20-22 degrees C) for 30 days. Their **enzymatic** and protein profile as compared with their initial characteristics after

they were grown in broth, were measured using API 20NE batteries of tests and gel electrophoresis. In L-R and NaCl 0.9% fluids, P. aeruginosa and Ag. radiobacter lost the ability to hydrolyse urea while Ac CDC retained this ability. In Dextrose 5% fluid the microorganisms lost most of their metabolic characters. The protein patterns in SDS-PAGE of samples prepared from cells of the tested microorganisms showed marked differences (in P. aeruginosa) to minor differences (in Ag. radiobacter and Ac CDC) while new proteins with M(r) > 66KDa revealed Ag. radiobacter cells. The gelatinolytic zymogram shows also differences between bacterial cells grown in nutrient broth and those that remained in parenteral fluids. These changes reflect the stress of the tested bacteria in an unfavorable condition. The alterations of injured bacteria could render them unable to grow on routine, for **sterilization testing**, culture media.

L35 ANSWER 6 OF 46 MEDLINE on STN
ACCESSION NUMBER: 93361317 MEDLINE
DOCUMENT NUMBER: 93361317 PubMed ID: 8355943
TITLE: The effect of same-day pregnancy testing on the incidence of luteal phase pregnancy.
AUTHOR: Lipscomb G H; Spellman J R; Ling F W
CORPORATE SOURCE: Department of Obstetrics and Gynecology, University of Tennessee, Memphis.
SOURCE: OBSTETRICS AND GYNECOLOGY, (1993 Sep) 82 (3) 411-3. Journal code: 0401101. ISSN: 0029-7844.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199309
ENTRY DATE: Entered STN: 19931008
Last Updated on STN: 19931008
Entered Medline: 19930921

AB OBJECTIVE: To assess the impact of same-day pregnancy testing on the incidence of luteal phase pregnancy (pregnancy in which conception occurs before sterilization). METHODS: Retrospectively, all patients (N = 1006) undergoing laparoscopic tubal ligations at the Regional Medical Center, Memphis, from May 1990 through December 1991 were reviewed for sterilization failures. Negative urine pregnancy tests were documented on all scheduled patients at their preoperative examination. After the first 401 sterilizations, same-day pregnancy testing with **enzyme** -linked immunosorbent assay (ELISA) pregnancy tests was instituted. We reviewed the records of all presumed sterilization failures as well as all patients with a positive pregnancy test on the day of surgery. Last menstrual period, ultrasound records, and date of delivery were analyzed to determine time of conception. RESULTS: Seven luteal phase pregnancies were discovered among the first 401 sterilization cases (17 per 1000). No luteal phase pregnancies occurred in the next 605 sterilizations after institution of same-day pregnancy testing. Eight patients' sterilizations were canceled because of a positive pregnancy test on the morning of surgery. If these patients had not been eliminated, the incidence of luteal phase pregnancies in this second group would have been 13 per 1000 **sterilization procedures**. CONCLUSION: Same-day pregnancy testing with an ELISA-type pregnancy test is a rapid, inexpensive, and effective means of reducing the incidence of luteal phase pregnancy.

L35 ANSWER 7 OF 46 MEDLINE on STN
ACCESSION NUMBER: 93286534 MEDLINE
DOCUMENT NUMBER: 93286534 PubMed ID: 8509738

TITLE: Effect of sterilization on contaminated sponges.
AUTHOR: Kuritani R H; McDonald N J; Sydiskis R J
CORPORATE SOURCE: Baltimore College of Dental Surgery, Dental School, University of Maryland at Baltimore.
SOURCE: JOURNAL OF ENDODONTICS, (1993 Feb) 19 (2) 68-70.
Journal code: 7511484. ISSN: 0099-2399.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals
ENTRY MONTH: 199307
ENTRY DATE: Entered STN: 19930723
Last Updated on STN: 19930723
Entered Medline: 19930715

AB Sponges are routinely used as a storage medium for endodontic files during clinical practice; however, very little research has been done to determine the effectiveness of **sterilization procedures** for these contaminated sponges. The purpose of this in vitro study was to determine the efficacy of chemical vapor sterilizers (chemiclaves), steam pressure sterilizers (autoclaves), and dry heat sterilizers on laboratory contaminated sponges. Four different types of sponges were used in this study: a black, relatively nonporous sponge; a red, semiporous stationary sponge; a blue, endodontic sponge, and a yellow, common household sponge. Natural sponges were eliminated from the study, because their large pore size made them unsuitable as a storage medium for endodontic instruments. The sponges were divided into three groups: chemiclave, autoclave, and dry heat. Five samples of each sponge type were impregnated with biological indicating strips containing spores of **Bacillus stearothermophilus**. Each sponge was subjected to 25 cycles of sterilization. The spore strip indicator was inserted into the sponges at 1, 5, 10, 15, 20, and 25 cycles. The spore strip was cultivated in trypticase soy broth medium solution at 55 +/- 1 degree C for 7 days. At 7 days the culture vials were read for turbidity; its presence indicating a positive culture. The samples that were subjected to chemiclaving demonstrated positive cultures of 0.00%, 0.00%, and 30.00% and those to autoclaving 3.33%, 0.00%, and 0.00% positive cultures for the black, red, and blue sponge types, respectively. None of the sponges **survived** dry heat sterilization. The O-Cell-O sponges become unusable when subjected to all of the sterilization methods used in this study.

L35 ANSWER 8 OF 46 MEDLINE on STN
ACCESSION NUMBER: 93182778 MEDLINE
DOCUMENT NUMBER: 93182778 PubMed ID: 8442519
TITLE: Effects of steam sterilization on the contents of sharps containers.
AUTHOR: Palenik C J; Cumberlander N D
CORPORATE SOURCE: Department of Oral Microbiology, Indiana University School of Dentistry, Indianapolis 46202.
CONTRACT NUMBER: RR-03487-04 (NCRR)
SOURCE: AMERICAN JOURNAL OF INFECTION CONTROL, (1993 Feb) 21 (1) 28-33.
Journal code: 8004854. ISSN: 0196-6553.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Nursing Journals
ENTRY MONTH: 199303
ENTRY DATE: Entered STN: 19930416
Last Updated on STN: 19930416
Entered Medline: 19930329

AB BACKGROUND: One form of medical waste known to be capable of transmitting disease is the contaminated sharp. Safe handling and disposal of sharps is an essential element of any infection control program. Many areas allow the on-site treatment of sharps containers. However, little information currently exists as to the most effective **sterilization procedures** and container designs.
METHODS: This study was intended to evaluate the effect treatment with various autoclaves had on bacterial endospores present on strips or needled syringes. Strips contained 1.7 x 10(5) **Bacillus stearothermophilus** spores; syringes were soiled with equal numbers of spores or with spores plus blood. Syringes were tested capped and uncapped. A gravity-displacement autoclave and a high-vacuum autoclave were used. Strips and syringes were placed within sharps containers three quarters filled with representative materials. Six types of containers were tested. Containers were processed sitting up or on their sides. Processed strips and needles were aerobically cultured at 56 degrees C for 7 days. If sterilization was not accomplished initially, additional exposure time was added. RESULTS: (1) Soiled syringes were more difficult to sterilize than strips. (2) Capping or the presence of blood did not affect sterilization efficiency. (3) Container positioning was important only for the gravity-displacement autoclave. (4) Additional exposure time was required in the gravity displacement autoclave when sterilizing soiled syringes but not strips. (5) High-vacuum autoclaving **killed** all spore challenges within the normal processing interval. CONCLUSIONS: The data indicate that processing of sharps containers within a gravity-displacement autoclave appears to require extended exposure intervals to achieve sterilization.

L35 ANSWER 9 OF 46 MEDLINE on STN
ACCESSION NUMBER: 93105461 MEDLINE
DOCUMENT NUMBER: 93105461 PubMed ID: 1334804
TITLE: Viability of Streptococcus mutans and Streptococcus sobrinus in whole saliva with varying concentrations of indigenous antimicrobial agents.
AUTHOR: Lenander-Lumikari M; Tenovuo J; Emilson C G; Vilja P
CORPORATE SOURCE: Department of Cardiology, Institute of Dentistry, University of Turku, Finland.
SOURCE: CARIES RESEARCH, (1992) 26 (5) 371-8.
Journal code: 0103374. ISSN: 0008-6568.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 199301
ENTRY DATE: Entered STN: 19930212
Last Updated on STN: 19930212
Entered Medline: 19930125

AB We have studied the possible relationship between indigenous salivary antimicrobial agents, indigenous mutans streptococci and the capability of added mutans streptococci to grow in saliva. Stimulated whole saliva was collected from 19 healthy donors. Saliva samples were sterilized, supplemented with glucose and inoculated with Streptococcus mutans or Streptococcus sobrinus. The mixtures were incubated for 20 h followed by counting of viable cells. Saliva samples were analysed, both before and after sterilization, for indigenous antimicrobial agents and the bacterial flora. The subjects could be divided into two groups: those (n = 9) whose saliva promoted and those (n = 10) whose saliva inhibited the growth of the inoculated streptococci. A statistically significant correlation (+0.82, $p < 0.001$) was found between the numbers of viable cells of S. mutans and S. sobrinus after incubation in saliva. The

sterilization procedure reduced the content of all antimicrobial proteins. Salivary antimicrobial factors, or levels of indigenous mutans streptococci, did not differ between the two groups. We conclude that none of the individual salivary antimicrobial factors alone can explain the large individual differences in growth-promoting or growth-inhibiting patterns of saliva on S. mutans and S. sobrinus. Inter-individually, saliva either supports or inhibits the growth of mutans streptococci, indicating a similar response of these two species in relation to the properties of saliva.

L35 ANSWER 10 OF 46 MEDLINE on STN
ACCESSION NUMBER: 92031784 MEDLINE
DOCUMENT NUMBER: 92031784 PubMed ID: 1932163
TITLE: Infection control practices in gastrointestinal endoscopy in the United States: a national survey.
AUTHOR: Gorse G J; Messner R L
SOURCE: GASTROENTEROLOGY NURSING, (1991 Oct) 14 (2) 72-9. Journal code: 8915377. ISSN: 1042-895X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Nursing Journals
ENTRY MONTH: 199111
ENTRY DATE: Entered STN: 19920124
Last Updated on STN: 19920124
Entered Medline: 19911127

AB OBJECTIVE: To ascertain current infection control practices, endoscope cleaning procedures, perceived risks of infection, and implementation of universal precautions in gastrointestinal endoscopy units in the United States. DESIGN: National mailed survey of gastroenterology nurses and associates conducted anonymously in March 1988. SETTING: Completed surveys were received from all 50 states and Puerto Rico and from all practice settings. The most common practice setting was private/community hospitals (66%). PARTICIPANTS: Of the 4,952 survey forms mailed to all members and to interested nonmembers of the Society of Gastrointestinal Nurses and Associates, 2, 158 (44%) were returned and 2,030 (41%) were completed and evaluable. Of the respondents, 1,487 (73%) were registered nurses. RESULTS: Sixty-seven percent (n = 1,358) of the respondents routinely used an **enzymatic** cleaner as a step in the instrument decontamination process; 93% (n = 1,879) chemically disinfected instruments after each case; and 88% (n = 1,779) disinfected endoscopes with an aqueous glutaraldehyde product. Respondents reported that they and a significantly smaller proportion of physicians (p less than .001) employed barrier precautions for all endoscopic cases involving possible contact with blood/body fluids of patients known (66% versus 57%, respectively) and not known (12% versus 8%, respectively) to have a bloodborne infection. Endoscopy-related infections, usually bacterial, were reported to have occurred at their institutions by 6% (n = 116) of respondents. CONCLUSIONS: We conclude that cleaning, disinfection, and **sterilization procedures** for gastrointestinal endoscopic instruments vary, that appropriate protective apparel is not always worn, and that some practices may lead to preventable endoscopy-related infection in patients.

L35 ANSWER 11 OF 46 MEDLINE on STN
ACCESSION NUMBER: 91324678 MEDLINE
DOCUMENT NUMBER: 91324678 PubMed ID: 1865099
TITLE: Infection control practices in gastrointestinal endoscopy in the United States: a national survey.
AUTHOR: Gorse G J; Messner R L

CORPORATE SOURCE: Division of Infectious Diseases, St. Louis University School of Medicine, MO 63104.
SOURCE: INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY, (1991 May) 12 (5) 289-96.
Journal code: 8804099. ISSN: 0899-823X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Nursing Journals
ENTRY MONTH: 199109
ENTRY DATE: Entered STN: 19910929
Last Updated on STN: 20000303
Entered Medline: 19910910

AB OBJECTIVE: To ascertain current infection control practices, endoscope cleaning procedures, perceived risks of infection, and implementation of universal precautions in gastrointestinal endoscopy units in the United States. DESIGN: National mailed survey of gastroenterology nurses and associates conducted anonymously in March 1988. SETTING: Completed surveys were received from all 50 states and Puerto Rico and from all practice settings. The most common practice setting was private/community hospitals (66%). PARTICIPANTS: Of the 4,952 survey forms mailed to all members and to interested nonmembers of the Society of Gastrointestinal Nurses and Associates, 2,158 (44%) were returned and 2,030 (41%) were completed and evaluable. Of the respondents, 1,487 (73%) were registered nurses. RESULTS: Sixty-seven percent (n = 1,358) of the respondents routinely used an **enzymatic** cleaner as a step in the instrument decontamination process; 93% (n = 1,879) chemically disinfected instruments after each case; and 88% (n = 1,779) disinfected endoscopes with an aqueous glutaraldehyde product. Respondents reported that they and a significantly smaller proportion of physicians (p less than .001) employed barrier precautions for all endoscopic cases involving possible contact with blood/body fluids of patients known (66% versus 57%, respectively) and not known (12% versus 8%, respectively) to have a bloodborne infection. Endoscopy-related infections, usually bacterial, were reported to have occurred at their institutions by 6% (n = 116) of respondents. CONCLUSIONS: We conclude that cleaning, disinfection, and **sterilization procedures** for gastrointestinal endoscopic instruments vary, that appropriate protective apparel is not always worn, and that some practices may lead to preventable endoscopy-related infection in patients.

L35 ANSWER 12 OF 46 MEDLINE on STN
ACCESSION NUMBER: 87294688 MEDLINE
DOCUMENT NUMBER: 87294688 PubMed ID: 3113100
TITLE: [Dependence of microbiologic test results of formaldehyde gas sterilization methods on the nature of the test material].
Abhangigkeit der mikrobiologischen Prufungsergebnisse von Formaldehyd-Gassterilisationsverfahren von der Materialbeschaffenheit des Testkorpers.
AUTHOR: Spicher G; Borchers U
SOURCE: ZENTRALBLATT FUR BAKTERIOLOGIE, MIKROBIOLOGIE UND HYGIENE. SERIE B, UMWELTHYGIENE, KRANKENHAUSHYGIENE, ARBEITSHYGIENE, PRAVENTIVE MEDIZIN, (1987 May) 184 (2) 108-21.
Journal code: 8606774. ISSN: 0932-6073.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198709

ENTRY DATE: Entered STN: 19900305
Last Updated on STN: 19970203
Entered Medline: 19870909

AB The efficiency of a formaldehyde gas **sterilization procedure** was evaluated with the aid of test pieces consisting of various materials. Both rigid and flexible tubes served as test pieces. The tubes were 75 cm long with an inner diameter of 1 mm and were sealed at one end. The bioindicators were placed inside the tubes close to the sealed end. Dried spores of **Bacillus stearothermophilus** adhering to linen threads served as test organisms. The test results varied according to the material of the test pieces and the thickness of their walls (see Table 1). In flexible tubes made of silicon rubber, all bioindicators became sterile, in tubes of stainless steel, all bioindicators exhibited test organisms that had **survived**. The findings for materials such as polyvinyl chloride, polyethylene, polyamide and polytetrafluorethylene ranged between these two extremes; the frequencies of bioindicators containing viable germs were 10, 55, 68 and 85%, respectively. Rigid and flexible tubes which had been sealed at both ends served to demonstrate that silicon rubber and polyvinyl chloride were highly permeable for formaldehyde and water vapour. Also the other plastic materials tested were permeable for formaldehyde and water vapour but longer exposure periods were needed to create conditions in the interior of the tubes that would result in a **killing** of the test organisms (see Fig 2). In this respect, polyamide exhibited a peculiar behaviour. The number of viable spores remained at the initial level for a long period before a decline took place. From the results of testing, it is concluded that test pieces must conform to the objects to be sterilized not only in their dimensions (length, inner diameter) but also in the characteristics of their material. The walls of the test pieces should not have a higher permeability for formaldehyde and water vapour than the material to be sterilized. The highest demands on the efficiency of formaldehyde gas **sterilization procedures** are those created by mental tubes and thick-walled flexible polytetrafluorethylene. Instruments and devices to be sterilized by a formaldehyde gas procedure should be preferentially made of materials which are sufficiently permeable for formaldehyde and water vapour as e.g. silicon rubber. Such gas-permeable components may considerably facilitate the sterilization of cavities which have a small lumen and are difficult to reach.

L35 ANSWER 13 OF 46 MEDLINE on STN
ACCESSION NUMBER: 86080255 MEDLINE
DOCUMENT NUMBER: 86080255 PubMed ID: 3852707
TITLE: Effect of gamma radiation versus ethylene oxide sterilization of dialyzers and blood lines on plasma levels of granulocyte elastase in hemodialyzed patients.
AUTHOR: Horl W H; Riegel W; Schollmeyer P
SOURCE: CLINICAL NEPHROLOGY, (1985 Nov) 24 (5) 232-6.
Journal code: 0364441. ISSN: 0301-0430.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198602
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 20000303
Entered Medline: 19860212

AB The effect of gamma versus ethylene oxide sterilization of different dialyzers (polyacrylonitrile, cuprophan) and blood lines on plasma levels of granulocyte elastase and of lysozyme during hemodialysis was investigated in 17 chronically uremic patients. Plasma levels of

granulocyte elastase increased during hemodialysis but significantly less in the presence of polyacrylonitrile compared with cuprophan membranes. In contrast, enhanced lysozyme plasma levels decreased during dialysis using the polyacrylonitrile dialyzer to values of healthy controls and remained unchanged using the cuprophan dialyzer. Both effects were not influenced by the way of sterilization. We conclude that granulocyte activation during hemodialysis occurs independently of the **sterilization procedure** of dialyzers and blood lines in patients showing no clinical signs of hypersensitivity.

L35 ANSWER 14 OF 46 MEDLINE on STN
ACCESSION NUMBER: 84149349 MEDLINE
DOCUMENT NUMBER: 84149349 PubMed ID: 6367309
TITLE: [Dependency of a microbiological test of a formaldehyde gas **sterilization procedure** on the shape of objects to be sterilized].
Abhangigkeit der mikrobiologischen Prufungsergebnisse eines Formaldehyd-Gassterilisationsverfahrens von der Form der zu sterilisierenden Objekte.
AUTHOR: Spicher G; Borchers U
SOURCE: ZENTRALBLATT FUR BAKTERIOLOGIE, MIKROBIOLOGIE UND HYGIENE. 1. ABT. ORIGINALE B, HYGIENE, (1983 Jun) 177 (5) 419-35.
Journal code: 8110036. ISSN: 0174-3015.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198404
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19900319
Entered Medline: 19840413

AB During the last decade, a number of procedures have been developed by different firms for the sterilization of heat-sensitive instruments using a mixture of formaldehyde and water vapor at a temperature of approximately 60 degrees C as means of sterilization. Instruments to be sterilized by this technique as e.g. sounds and catheters normally have long narrow cavities. Therefore, the formaldehyde gas **sterilization procedures** have to be tested primarily for their capability of achieving a sufficient microbicidal effect within those cavities. For this purpose, the bioindicators are placed into special test pieces. The test pieces commonly in use differ widely in their construction, shape, and size. They mostly consist of some hollow cylinder with an attached capillary or a tube (see Table 1). The authors demonstrated by means of models that the variety of test pieces in use meant that the **sterilization procedures** had to meet quite different requirements. The models consisted of flexible tubes differing in diameter and length and were connected to short glass tubes. These glass tubes having identical or wider inner diameters than the flexible tubes served as receptacles containing the bioindicators. Spores of **Bacillus stearothermophilus** served as test organisms. The spores were suspended in defibrinated sheep blood and dried on filter paper. The efficiency of the sterilization technique was measured in terms of the relative number of indicator strips with **surviving** germs (i.e. non-sterilized indicators) after treatment of the test pieces with the formaldehyde gas. At first, the test results were examined as to their dependency on the length of the flexible tubes. These tubes were 3 mm wide and 5 to 100 cm long, each being sealed at one end and with the bioindicators placed near the sealed end. The percentage of indicators with **surviving** germs increased with the length of the tubes. After the sterilization process, nearly all indicators (92%)

contained in the 1 m tubes proved to be non-sterile (see Table 2). The same results were obtained with tubes open at both ends, with the bioindicators located in the middle section of the tubes (see Table 3). Using tubes of 1 m length, the dependency of the test results on the inner diameter of the test pieces was demonstrated. While all indicators placed into tubes of 3 mm inner diameter still contained **surviving** germs, those in the tubes of 9 mm inner diameter were all sterile (see Table 4).(ABSTRACT TRUNCATED AT 400 WORDS)

L35 ANSWER 15 OF 46 MEDLINE on STN
ACCESSION NUMBER: 83018506 MEDLINE
DOCUMENT NUMBER: 83018506 PubMed ID: 7124163
TITLE: [Hygienic precautions and microbiological quality control during the manufacturing of sterile drugs]. Hygienemassnahmen und mikrobiologische Kontrollen bei der Herstellung steriler Arzneizubereitungen.
AUTHOR: Zuge R
SOURCE: ZENTRALBLATT FUR BAKTERIOLOGIE, MIKROBIOLOGIE UND HYGIENE. 1. ABT. ORIGINALE B, HYGIENE, (1982 May) 176 (2-3) 134-41. Journal code: 8110036. ISSN: 0174-3015.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198212
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19821202

AB By the use of an example such as the production of a sterile solution, the hygienic precautions and control procedures required in the pharmaceutical industry are described. Starting materials should be free of germs and pyrogens. During production experimentally tested cleaning procedures for equipment are to be observed. A critical production step is the filtration. The time limits between starting and sterilizing the solution as well as the leakproofness of the filters have to be tested microbiological. --Special microbiological requirements exist for rooms, surfaces and clothes. Process-sterility control is carried out by periodic filling of ampules with nutrient broth. After running through the "compact unit" of the aseptic filling line the ampules contaminated before with endotoxin, are free of pyrogens. --Sterility depends on the count and kind of germs before **sterilization procedure** . The probability of **survival** of **microorganismen** should be less than 1:1 million.

L35 ANSWER 16 OF 46 MEDLINE on STN
ACCESSION NUMBER: 79058364 MEDLINE
DOCUMENT NUMBER: 79058364 PubMed ID: 362776
TITLE: [Application of a new method for the calculation and description of the resistance of microbiological indicators. I. Testing of several common microbiological **sterilization indicators** (author's transl)]. Anwendung eines neuen Verfahrens zur Berechnung und Beschreibung der Widerstandsfahigkeit mikrobiologischer Indikatoren. I. Untersuchungen an einigen gebrauchlichen mikrobiologischen Sterilisationsindikatoren.
AUTHOR: Spicher G; Peters J
SOURCE: ZENTRALBLATT FUR BAKTERIOLOGIE, PARASITENKUNDE, INFEKTIONSKRANKHEITEN UND HYGIENE. ERSTE ABTEILUNG ORIGINALE. REIHE B: HYGIENE, BETRIEBSHYGIENE, PRAVENTIVE

MEDIZIN, (1978 Aug) 167 (1-2) 63-82.
Journal code: 7809115. ISSN: 0300-9661.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197901
ENTRY DATE: Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19790126

AB The method described by SPICHER and PETERS (1975) for the calculation and description of the resistance of microbiological indicators was tested. As test objects served spore-containing earth according to DIN 58946, Attest indicators (3 M Company, Minnesota) and Oxoid Spore Strips (Oxoid Ltd., London). The tests were performed not only for different batches of indicators but also for preparations of different age. After application of steam (120 degrees C), the indicators were examined for the presence of **surviving** germs capable of multiplication. When plotting the frequency of indicators with **surviving** germs (q) against the duration of steam action, S-shaped curves were obtained as expected. By altering the scale of the ordinate (y = lg (-ln(1 - q))), the S-shaped curves could be transformed into straight lines. Thus, the experimentally established paired values could be used for a calculation of regression. This method of calculation proved to be suitable in all cases studied. By indicating the position and the slope of these straight regression lines, the resistance of microbiological indicators can be exactly described (cf. Table 2). This method is applicable not only to indicators containing culture spores but also for native spore-containing earth. The indicators examined differed in their resistance and stability. Seven out of eight batches of Attest indicators (cf Figs. 1 and 2 and Table 1) fulfilled the requirements of DIN 58946, Part 4, for the resistance of bio-indicators for steam sterilization. One of the batches had a slightly higher resistance. The Attest indicators tested were of good stability (see Fig. 1 and Table 1). Where **surviving** germs were present on the indicators after treatment by steam, their growth was recognizable, in 99% of cases, already after incubation of the cultures for 24 hours. Only two batches of Oxoid Spore Strips were available for testing. One batch was of a higher resistance than required by DIN 58946. The second batch was slightly above the lower limit of the permissible range (see Fig. 3). During storage for 12 months, the resistance of both batches was reduced by 3--4 min. Where the indicators exhibited **surviving** germs after treatment by steam, growth was recognizable in 87% of the cases after incubation for 24 hours, while for the other indicators, incubation for 48 hours was necessary. The experiments confirmed the good stability of native spore-containing earth (see Fig. 5). Within 4--5 years, the steam resistance of the preparations decreased only by 3--4 min.

L35 ANSWER 17 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 2003:414223 BIOSIS
DOCUMENT NUMBER: PREV200300414223
TITLE: HIV infections in sub-Saharan Africa.
AUTHOR(S): Zebaze, R. M. D. [Reprint Author]
CORPORATE SOURCE: Austin and Repatriation Medical Centre, University of Melbourne, Heidelberg, VIC, 3084, Australia
zebaze@unimelb.edu.au
SOURCE: International Journal of STD and AIDS, (June 2003) Vol. 14, No. 6, pp. 428-429. print.
ISSN: 0956-4624.
DOCUMENT TYPE: Letter
LANGUAGE: English

ENTRY DATE: Entered STN: 10 Sep 2003
Last Updated on STN: 10 Sep 2003

L35 ANSWER 18 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2003:291641 BIOSIS
DOCUMENT NUMBER: PREV200300291641
TITLE: Rapid readout **sterilization indicator** for liquid peracetic acid **sterilization procedures.**
AUTHOR(S): Witcher, Kelvin J. [Inventor, Reprint Author]; Woodson, Lewis P. [Inventor]
CORPORATE SOURCE: ASSIGNEE: 3M Innovative Properties Company
PATENT INFORMATION: US 6566090 May 20, 2003
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (May 20, 2003) Vol. 1270, No. 3. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133 (ISSN print).
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Jun 2003
Last Updated on STN: 19 Jun 2003

AB A **sterilization indicator** is useful for testing the effectiveness of **sterilization procedures** that disinfect objects by contacting them with a liquid **sterilization procedure.** The indicator includes an outer container having an open end and a cover material associated with the open end that is impermeable to liquids and bacteria. An **enzyme**-gel matrix is coated on a surface within the outer container that comprises a biologically inert polymeric gel and a source of an active **enzyme** dispersed within the gel. The **enzyme** has an activity that is correlated with the **survival** of at least one test **microorganism** that is commonly used to **monitor** the **effectiveness** of a **sterilization procedure.** A breakable ampoule within the outer container contains a substrate that is capable of reacting with any active **enzyme** remaining after the indicator has been subjected to a **sterilization procedure** to provide a detectable indication that the **sterilization procedure** was ineffective.

L35 ANSWER 19 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2003:172867 BIOSIS
DOCUMENT NUMBER: PREV200300172867
TITLE: Indicator systems for determination of sterilization.
AUTHOR(S): Hendricks, Judy K. [Inventor, Reprint Author]; Rechsteiner, Shaundrea L. [Inventor]; Gorski, Joel R. [Inventor]; Lee, Adam [Inventor]; Fiske, Roger [Inventor]
CORPORATE SOURCE: Albuquerque, NM, USA
ASSIGNEE: 3M Innovative Properties Company
PATENT INFORMATION: US 6528277 March 04, 2003
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Mar. 4, 2003) Vol. 1268, No. 1. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133 (ISSN print).
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Apr 2003
Last Updated on STN: 2 Apr 2003

AB This invention relates to a container and method for detecting a specific environmental parameter or combination of parameters, or for determining the effectiveness of a **sterilization procedure.** The

invention relates to test indicators containing controlled volumes of compressed, gas-permeable materials, and modified caps comprising one or more apertures, sterilant permeable inserts, protruding members, or a combination thereof, and to methods for using test indicators for determining the efficacy of different types of sterilization processes. If proper sterilization conditions are not met, the interactive **enzyme** system remains active, and a color product forms upon the addition of the remaining components of the **enzyme** system. If the proper sterilization conditions are met, the sterilant destroys the interactive **enzymes** and no color product is formed. Inactivation of the **enzyme** system parallels the inactivation of bacterial spores subjected to the sterilization process. Results are available in from a few seconds to a few hours. The test indicator can also be placed into a container with material such that the design simulates an environmental parameter test of the sterilization process.

L35 ANSWER 20 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2002:278567 BIOSIS
DOCUMENT NUMBER: PREV200200278567
TITLE: **Sterilization indicator** with chemically stabilized **enzyme**.
AUTHOR(S): Foltz, William E. [Inventor, Reprint author]; Asmus, Robert A. [Inventor]; Lulich, Ronald G. [Inventor]
CORPORATE SOURCE: Cottage Grove, MN, USA
ASSIGNEE: 3M Innovative Properties Company
PATENT INFORMATION: US 6355448 March 12, 2002
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Mar. 12, 2002) Vol. 1256, No. 2. http://www.uspto.gov/web/menu/patdata.html. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 8 May 2002
Last Updated on STN: 8 May 2002

AB A **sterilization indicator** for testing the effectiveness of a **sterilization procedure** comprises a source of an **enzyme**, a sterilant-resistant chemical associated with the **enzyme**, and a substrate that reacts with the **enzyme** to form a detectable **enzyme**-modified product that provides an indication of the failure of the **sterilization procedure**. The sterilant-resistant chemical may be a polyglycerol alkyl ester, polyglycerol alkyl ether, an ethoxylated polyhydric alcohol ester, or a polyhydric alcohol ether. The indicator may be used to test the effectiveness of a hydrogen peroxide plasma **sterilization procedure** and may be provided with a non-challenge test pack or a lumen-challenge test pack.

L35 ANSWER 21 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2002:219020 BIOSIS
DOCUMENT NUMBER: PREV200200219020
TITLE: Rapid readout **sterilization indicator** for liquid peracetic acid **sterilization procedures**.
AUTHOR(S): Witcher, Kelvin J. [Inventor, Reprint author]; Woodson, Lewis P. [Inventor]
CORPORATE SOURCE: St. Paul, MN, USA
ASSIGNEE: 3M Innovative Properties Company
PATENT INFORMATION: US 6352837 March 05, 2002
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Mar. 5, 2002) Vol. 1256, No. 1.

http://www.uspto.gov/web/menu/patdata.html. e-file.
CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Mar 2002
Last Updated on STN: 27 Mar 2002

AB A **sterilization indicator** is useful for testing the effectiveness of **sterilization procedures** that disinfect objects by contacting them with a liquid **sterilization procedure**. The indicator includes an outer container having an open end and a cover material associated with the open end that is impermeable to liquids and bacteria. An **enzyme**-gel matrix is coated on a surface within the outer container that comprises a biologically inert polymeric gel and a source of an active **enzyme** dispersed within the gel. The **enzyme** has an activity that is correlated with the **survival** of at least one test **microorganism** that is commonly used to **monitor** the **effectiveness** of a **sterilization procedure**. A breakable ampoule within the outer container contains a substrate that is capable of reacting with any active **enzyme** remaining after the indicator has been subjected to a **sterilization procedure** to provide a detectable indication that the **sterilization procedure** was ineffective.

L35 ANSWER 22 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2001:3293 BIOSIS
DOCUMENT NUMBER: PREV200100003293
TITLE: Small-scale shifting mosaics of two dominant grassland species: The possible role of soil-borne pathogens.
AUTHOR(S): Olff, H. [Reprint author]; Hoorens, B.; de Goede, R. G. M.; van der Putten, W. H.; Gleichman, J. M.
CORPORATE SOURCE: Tropical Nature Conservation and Vertebrate Ecology Group, Wageningen University, Bornsesteeg 69, 6708 PD, Wageningen, Netherlands
han.olff@staf.ton.wau.nl
SOURCE: Oecologia (Berlin), (October, 2000) Vol. 125, No. 1, pp. 45-54. print.
CODEN: OECOBX. ISSN: 0029-8549.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 21 Dec 2000
Last Updated on STN: 21 Dec 2000

AB We analyzed the dynamics of dominant plant species in a grazed grassland over 17 years, and investigated whether local shifts in these dominant species, leading to vegetation mosaics, could be attributed to interactions between plants and soil-borne pathogens. We found that Festuca rubra and Carex arenaria locally alternated in abundance, with different sites close together behaving out of phase, resulting in a shifting mosaic. The net effect of **killing** all soil biota on the growth of these two species was investigated in a greenhouse experiment using gamma radiation, controlling for possible effects of sterilization on soil chemistry. Both plant species showed a strong net positive response to soil **sterilization, indicating** that pathogens (e.g., nematodes, pathogenic fungi) outweighed the effect of mutualists (e.g., mycorrhizae). This positive growth response towards soil sterilization appeared not be due to effects of sterilization on soil chemistry. Growth of Carex was strongly reduced by soil-borne pathogens (86% reduction relative to its growth on sterilized soil) on soil from a site where this species decreased during the last decade (and Festuca increased), while it was reduced much less (50%) on soil from a nearby

site where it increased in abundance during the last decade. Similarly, Festuca was reduced more (67%) on soil from the site where it decreased (and Carex increased) than on soil from the site where it increased (55%, the site where Carex decreased). Plant-feeding nematodes showed high small-scale variation in densities, and we related this variation to the observed growth reductions in both plant species. Carex growth on unsterilized soil was significantly more reduced at higher densities of plant-feeding nematodes, while the growth reduction in Festuca was independent of plant-feeding nematode densities. At high plant-feeding nematode densities, growth of Carex was reduced more than Festuca, while at low nematode densities the opposite was found. Each plant species thus seems to be affected by different (groups of) soil-borne pathogens. The resulting interaction web of plants and soil-borne pathogens is discussed. We hypothesize that soil disturbances by digging ants and rabbits may explain the small-scale variation in nematode densities, by locally providing "fresh" sand. We conclude that soil-borne pathogens may contribute to plant diversity and spatial mosaics of plants in grasslands.

L35 ANSWER 23 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2000:293591 BIOSIS
DOCUMENT NUMBER: PREV200000293591
TITLE: Indicator systems for determination of sterilization.
AUTHOR(S): Hendricks, Judy K. [Inventor, Reprint author]; Rechsteiner, Shaundrea L. [Inventor]; Gorski, Joel R. [Inventor]
CORPORATE SOURCE: Marrietta, GA, USA
ASSIGNEE: North American Science Associates, Northwood, OH, USA
PATENT INFORMATION: US 5989852 November 23, 1999
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 23, 1999) Vol. 1228, No. 4. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Jul 2000
Last Updated on STN: 7 Jan 2002

AB This invention relates to novel apparatus and methods for inserting and positioning a compressible material into a container and for using the container for detecting a specific environmental parameter or combination of parameters, or for determining the effectiveness of a **sterilization procedure.** Precise positioning of a plug of compressible material in a container has been discovered to provide flexibility necessary for production of indicator systems that vary in their response to sterilizing conditions to reflect the efficacy of sterilizers based on different modes of sterilization and reproduceability necessary for accurate monitoring of each mode. The invention also relates to test indicators containing controlled volumes of compressed, gas-permeable materials and to methods for using test indicators for determining the efficacy of different types of sterilization processes. The test indicator consists of a plurality of interactive **enzymes** in a container with at least one opening. The opening is filled with a compressed cylindrical foam insert and the test indicator is placed into the sterilization chamber. The foam insert regulates the amount of sterilant such as steam, gas, chemicals or plasma entering the test indicator. After the sterilization cycle is complete, the foam insert is removed and the remaining components of the **enzyme** system are combined. If the proper sterilization conditions were not met, the interactive **enzyme** system remains active, and a color product forms upon the addition of the remaining components of the **enzyme** system. If the proper sterilization conditions were met, the sterilant destroys the interactive **enzymes** and no color product is formed.

Inactivation of the **enzyme** system parallels the inactivation of bacterial spores subjected to the sterilization process. Results are available in from a few seconds to a few hours. The test indicator can also be placed into a container with material such that the designs simulates an environmental parameter test of the sterilization process.

L35 ANSWER 24 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1996:476873 BIOSIS
DOCUMENT NUMBER: PREV199699206429
TITLE: How to limit the spread of Creutzfeldt-Jakob disease.
AUTHOR(S): Dormont, Dominique
CORPORATE SOURCE: Service de Neurovirologie, CEA/CRSSA/DSV/DRM, B.P. 6, 92265 Fontenay aux Roses Cedex, France
SOURCE: Infection Control and Hospital Epidemiology, (1996) Vol. 17, No. 8, pp. 521-528.
ISSN: 0899-823X.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Oct 1996
Last Updated on STN: 24 Oct 1996

AB Transmissible spongiform encephalopathies are rare **lethal** diseases induced in humans and animals by unconventional agents called transmissible spongiform encephalopathy agents (TSEAs), virions, or prions. Several cases of iatrogenic Creutzfeldt-Jakob disease (CJD) have been reported in the literature after neurosurgery, treatment with pituitary-derived hormones, corneal grafting, and use of dura mater lyophilisates. In a given infected individual, TSEA-associated infectiousness depends on the nature of the organ: the central nervous system has the highest infectiousness, spleen and lymph nodes a medium infectiousness, and organs such as bone, skin, or skeletal muscles do not harbor any detectable infectiousness in experimental models. Transmissible spongiform encephalopathy/prions have unconventional properties; in particular, they resist almost all the chemical and physical processes that inactivate conventional viruses. Therefore, prevention of CJD agent transmission must be taken into account in daily hospital practice. Efficient **sterilization procedures** should be determined. In tissue and blood donation, donors with a neurologic history must be excluded, and patients treated with pituitary-derived hormones should be considered potentially infected with TSEA and excluded (Infect Control Hosp Epidemiol 1996;17:521-528).

L35 ANSWER 25 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1994:157608 BIOSIS
DOCUMENT NUMBER: PREV199497170608
TITLE: Diluted broth culture as a better charcoal based inoculant for legumes.
AUTHOR(S): Pathak, D. V.; Garg, F. C.
CORPORATE SOURCE: Dep. Microbiol., CCS, HAU, Hisar-125 004, India
SOURCE: Annals of Biology (Ludhiana), (1993) Vol. 9, No. 2, pp. 184-187.
CODEN: ANBIEO. ISSN: 0970-0153.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 8 Apr 1994
Last Updated on STN: 10 Apr 1994

AB Inoculants of Rhizobium phaseoli TAL 182 and Rhizobium sp. CT-2014 were diluted 100 times and then diluted and undiluted broth cultures were incorporated into gamma-irradiated and steam sterilized wood charcoal. These strains attained population densities above 1 times 10-8 cells gm-1

of the carrier within 30 days of incubation. Number of viable rhizobia were sustained well above 1 times 10-7 gm-1 after 90 days of incorporation of diluted and undiluted broth inoculants. The methods of **sterilization tested** also did not affect the quality of carrier as the **survival** of rhizobia in the carrier sterilized by two methods was almost equal.

L35 ANSWER 26 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1993:206343 BIOSIS
DOCUMENT NUMBER: PREV199395107568
TITLE: Development and evaluation of a novel sterilizer with rotary vibrators.
AUTHOR(S): Murao, Sawao; Nomura, Yoshiyuki [Reprint author]; Nagata, Satoshi; Iwamoto, Tomoki; Iwahara, Masayoshi; Shin, Takashi
CORPORATE SOURCE: Dep. Appl. Microbial Technol., The Kumamoto Inst. Technol., Ikeda 4-22-1, Kumamoto 860, Japan
SOURCE: International Journal of Food Microbiology, (1993) Vol. 18, No. 1, pp. 63-70.
CODEN: IJFMDD. ISSN: 0168-1605.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 23 Apr 1993
Last Updated on STN: 23 Apr 1993

AB A novel steam-air sterilizer with rotary vibrators was developed with the airm of promoting heat transfer and the effective sterilization of foods. To evaluate the effects of the sterilizer, experiments to examine heat transfer and **sterilization tests** were carried out. In the experiments to examine heat transfer, heat penetration factors of sterilizer with vibration, j and f-h values, were 1.70 and 1.50, respectively, while those of sterilizer without vibration were 1.83 and 2.32, respectively. In the sterilization with vibration, no **surviving** cells were detected after 3 min, whereas 7 min were required for sterilization without vibration. The rate of the amino carbonyl reaction was repressed by heat treatment with vibration.

L35 ANSWER 27 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1992:210464 BIOSIS
DOCUMENT NUMBER: PREV199293110689; BA93:110689
TITLE: THE INFLUENCE OF STORAGE STABILITY ON THE USE OF CAROB PULP AQUEOUS EXTRACT AS RAW MATERIAL FOR FERMENTATION PROCESSES.
AUTHOR(S): ROSEIRO J C [Reprint author]; GIRIO F; AMARAL-COLLACO M T
CORPORATE SOURCE: LABORATORIO NACIONAL DE ENGENHARIA E TECHNOLOGIA INDUSTRIAL, DEPARTAMENTO DE TECHNOLOGIA DAS INDUSTRIAS ALIMENTARES, UNIDADE DE BIOTECHNOLOGIA RUA VALE FORMOSO, 1, 1900 LISBOA, PORTUGAL
SOURCE: Lebensmittel-Wissenschaft and Technologie, (1991) Vol. 24, No. 6, pp. 508-512.
CODEN: LBWTAP. ISSN: 0023-6438.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 4 May 1992
Last Updated on STN: 5 May 1992

AB Aqueous extracts of carob pulp were found to be biochemically unstable. Syrups submitted to two different **sterilization procedures** were subsequently stored at 4° C. Syrup sterilized by microfiltration showed a very rapid inversion of sucrose and the initial 3.0 mM of isobutyric acid, responsible for acid toxicity on biological systems, doubled to 6 mM during the first 20 days. Heat treated syrup remained unchanged during the period of study. An

enzymatic analysis showed that the carob extracts exhibited invertase and esterase specific activities of 369 and 221 U/mg, respectively. Because the inversion of sucrose was faster than the acid formation, it was possible to obtain a fermentable syrup with maximal fructose and glucose and low isobutyric acid content by heating the extract within the first 5 days after production.

L35 ANSWER 28 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1992:43913 BIOSIS
DOCUMENT NUMBER: PREV199293023888; BA93:23888
TITLE: COMPETITIVE OUTCOME AMONG FOUR PASTURE SPECIES IN STERILIZED AND UNSTERILIZED SOILS.
AUTHOR(S): TURKINGTON R [Reprint author]; KLEIN E
CORPORATE SOURCE: BOTANY DEP, UNIVERSITY BRITISH COLUMBIA, VANVOUVER, BRITISH COLUMBIA, CANADA V6T 1Z4
SOURCE: Soil Biology and Biochemistry, (1991) Vol. 23, No. 9, pp. 837-844.
CODEN: SBIOAH. ISSN: 0038-0717.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 13 Jan 1992
Last Updated on STN: 13 Jan 1992

AB Four pasture species (Dactylis glomerata, Holcus lanatus, Lolium perenne and Trifolium repens) were grown in monoculture and in all possible 2-, 3-, and 4-species combinations in pots. One set of pots was filled with sterilized soil in which most soil **microorganisms** and mycorrhiza had been eliminated, a second set was unsterilized and had an added Rhizobium inoculum. The experiment had four successive destructive harvests. For each plant species, regardless of the identity of its competitors, percentage **survival** was lowest in unsterilized soils, but the mean weight of **survivors** was unaffected, except for T. repens which had an increased biomass. In addition, at the first harvest the **microorganisms** and each of the plant species had a significant effect on the relative growth rates of each of the target plant species but this effect was not continued to the final harvest. It is argued that either (a) in the unsterilized soils **microorganisms** inhibit germination of some seeds or adversely affect young seedlings, and that they compete with growing plants for limited resources, (b) sterilization eliminates most of the bacteria present and this along with the added Rhizobium inoculum might contribute to the higher **survival** in sterilized soil, or (c) the nature of **sterilization procedure** alone increases the availability of essential resources to growing plants.

L35 ANSWER 29 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1991:316643 BIOSIS
DOCUMENT NUMBER: PREV199192027158; BA92:27158
TITLE: PREPARATION AND CHEMISTRY OF THE ARTIFICIAL ALGAL CULTURE MEDIUM AQUIL.
AUTHOR(S): PRICE N M [Reprint author]; HARRISON G I; HERING J G; HUDSON R J; NIREL P M V; PALENIK B; MOREL F M M
CORPORATE SOURCE: R M PARSONS LAB, MASS INST TECHNOL, CAMBRIDGE, MASS 02139, USA
SOURCE: Biological Oceanography, Vol. 6, No. 5-6, pp. 443-462. 1988-1989.
ISSN: 0196-5581.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

ENTRY DATE: Entered STN: 15 Jul 1991
Last Updated on STN: 16 Jul 1991

AB The culture medium Aquil has been designed for studying trace metal physiology in algae. We describe recent modifications in the preparation of Aquil and discuss processes that affect its trace metals and their physiological effects. The major changes in Aquil preparation are purification of the Chelex column to avoid contamination by chelating agents, use of alternative **sterilization procedures**, and increases in the concentration of trace metal buffers. During growth, phytoplankton take up trace metals, thus continuously reducing their concentrations in the medium. Algae can also modify the redox state and degree of organic complexion of trace metals through the direct and indirect activity of cell surface **enzymes** and the release of metabolites. Illumination of the culture medium necessary to promote photosynthesis also promotes a variety of photochemical reactions that alter the chemistry of the medium and maintain it in a state of disequilibrium. In particular, light absorption by FeEDTA leads to reduction of the iron and oxidation of the EDTA. Rapid reoxidation of Fe(II) leads to a high steady-state inorganic Fe(III) concentration. Slow coordination kinetics with chelating agents contribute to maintaining the disequilibrium conditions promoted by cellular and photochemical processes. Kinetic processes rather than pseudo-equilibrium conditions are now the focus in the study of trace metal-phytoplankton interactions.

L35 ANSWER 30 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1991:137903 BIOSIS
DOCUMENT NUMBER: PREV199191074443; BA91:74443
TITLE: POST-PCR STERILIZATION DEVELOPMENT AND APPLICATION TO AN HIV-1 DIAGNOSTIC ASSAY.
AUTHOR(S): ISAACS S T [Reprint author]; TESSMAN J W; METCHETTE K C; HEARST J E; CIMINO G D
CORPORATE SOURCE: HRI RES INC, 2315 FIFTH STREET, BERKELEY, CALIF 94710, USA
SOURCE: Nucleic Acids Research, (1991) Vol. 19, No. 1, pp. 109-116. CODEN: NARHAD. ISSN: 0305-1048.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 14 Mar 1991
Last Updated on STN: 14 Mar 1991

AB We have developed an effective post-PCR sterilization process and have applied the procedure to a diagnostic assay for HIV-1. The method, which is based on isopsoralen photochemistry, satisfies both the inactivation and hybridization requirements of a practical sterilization process. The key feature of the technique is the use of isopsoralen compounds which form covalent photochemical adducts with DNA. These covalent adducts prevent subsequent extension of previously amplified sequences (amplicons) by Taq polymerase. Isopsoralens have minimal inhibitory effect on the PCR, are activated by long wavelength ultraviolet light, provide sufficient numbers of covalent adducts to impart effective sterilization, modify the amplified sequence such that it remains single-stranded, and have little effect on subsequent hybridization. The **sterilization procedure** can be applied to a closed system and is suitable for use with commonly used detection formats. The photochemical sterilization protocol we have devised is an effective and pragmatic method for eliminating the amplicon carryover problem associated with the PCR. While the work described here is limited to HIV-1, proper use of the technique will relieve the concern associated with carryover for a wide variety of amplicons, especially in the clinical setting.

L35 ANSWER 31 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 1990:425163 BIOSIS
DOCUMENT NUMBER: PREV199090085964; BA90:85964
TITLE: COLONY FORMATION BY **SUBLETHALLY** HEAT-INJURED ZYGOSACCHAROMYCES-ROUXII AS AFFECTED BY SOLUTES IN THE RECOVERY MEDIUM AND PROCEDURE FOR STERILIZING MEDIUM.
AUTHOR(S): GOLDEN D A [Reprint author]; BEUCHAT L R
CORPORATE SOURCE: DEP FOOF SCI TECHNOL, THE UNIV GEORGIA, AGRIC EXP STN, GRIFFIN, GA 30223-1797, USA
SOURCE: Applied and Environmental Microbiology, (1990) Vol. 56, No. 8, pp. 2319-2326.
CODEN: AEMIDF. ISSN: 0099-2240.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 22 Sep 1990
Last Updated on STN: 23 Sep 1990

AB Recovery and colony formation by healthy and **sublethally** heat-injured cells of Zygosaccharomyces rouxii as influenced by the procedure for sterilizing recovery media (YM agar [YMA], wort agar, cornmeal agar, and oatmeal agar) were investigated. Media were supplementd with various concentrations of glucose, sucrose, **glycerol**, or sorbitol and sterilized by autoclaving (110°, 15 min) and by repeated treatment with steam (100°C). An increase in sensitivity was observed when heat-injured cells were plated on glucose-supplemented YMA at an aw of 0.880 compared with aws of 0.933 and 0.998. Colonies which developed from unheated and heated cells on YMA at aws of 0.998 and 0.933 generally exceeded 0.5 mm in diameter within 3.5 to 4 days of incubation at 25°C, whereas colonies formed on YMA at an aw of 0.880 typically did not exceed 0.5 mm in diameter until after 5.5 to 6.5 days of incubation. The number of colonies exceeding 0.5 mm in diameter which were formed by heat-injured cells on YMA at an aw of 0.880 was 2 to 3 logs less than the total number of colonies detected, i.e., on YMA at an aw of 0.933 and using no limits of exclusion based on colony diameter. A substantial portion of cells which **survived** heat treatment were **sublethally** injured as evidenced by increased sensitivity to a suboptimum aw (0.880). In no instance was recovery of Z. rouxii significantly affected by medium **sterilization procedure** when glucose or sorbitol was used as the aw suppressing solute. In 7 of 80 pair comparisons (autoclaving versus steaming), significant differences were detected in populations recovered on media supplemented with sucrose and **glycerol**. In six of these seven pairs, significantly higher populations were detected of steamed versus autoclaved media. Significant differences in recovery of unheated cells were due to solute type in 16 of 80 comparisons; for heated cells, significant differences were noted for 34 comparisons. When differences did occur, the enhanced effect of solute on recovery of unheated and heat cells was typically in the order of glucose ≥ sucrose ≥ sorbitol and glucose ≥ **glycerol** ≥ sucrose ≥ sorbitol.

L35 ANSWER 32 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1990:382464 BIOSIS
DOCUMENT NUMBER: PREV199090069145; BA90:69145
TITLE: PERIOPERATIVE INFECTIONS IN NIGERIANS A SEVEN-YEAR PROSPECTIVE STUDY.
AUTHOR(S): ODELOWO E O O [Reprint author]; ONILE B A
CORPORATE SOURCE: DEP SURGERY, UNIV ILORIN, ILORIN, NIGERIA
SOURCE: East African Medical Journal, (1990) Vol. 67, No. 3, pp. 172-181.
CODEN: EAMJAV. ISSN: 0012-835X.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 21 Aug 1990
Last Updated on STN: 21 Aug 1990

AB The introduction of simple, measures in addition to usual aseptic and antiseptic measures at the University of Ilorin Teaching Hospital theatre in Ilorin, Nigeria, led to a significant decrease in perioperative infection rate in a pilot study. These measures were applied to 440 operative procedures in a unit over a 7-year period in an old as well as new theatre. Sterility tests on sterilizing packs, nasal and throat swabs and bacteria-carrying particle samplings were done to document and limit the sources of wound contamination. Mortality and infection rates were significantly higher among patients undergoing thoracic than extrathoracic surgical operation ($P < 0.05$; $p < 0.005$) including post-tube thoracostomy empyema. Clean and clean-contaminated cases **survived** operations significantly more frequently and were significantly less infected than the contaminated and dirty cases (< 0.001; $p < 0.005$). Although there was significantly higher mortality ($p < 0.05$) in patients older than 31 years, there was no significantly higher infection rate. Neither the mortality rate nor infection rate was significantly affected by seasonal and patients' sex. Overall infection rate was 7.5% (32 out of 428 fully evaluated patients) while wound and non-wound infection rate in this study is an improvement over those previously reported in this country.

L35 ANSWER 33 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1986:299585 BIOSIS
DOCUMENT NUMBER: PREV198682033491; BA82:33491
TITLE: CONVERSION INTO ACETONE AND BUTANOL OF LIGNOCELLULOSIC SUBSTRATES PRETREATED BY STEAM EXPLOSION.
AUTHOR(S): MARCHAL R [Reprint author]; ROPARS M; VANDECASTEELE J P
CORPORATE SOURCE: DIRECTION BIOTECHNOL ET ENVIRON, INST FRANCAIS DU PETROLE, 92506 RUEIL-MALMAISON, FRANCE
SOURCE: Biotechnology Letters, (1986) Vol. 8, No. 5, pp. 365-370. CODEN: BILED3. ISSN: 0141-5492.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 25 Jul 1986
Last Updated on STN: 25 Jul 1986

AB Hydrolysates obtained by **enzymatic** saccharification of wheat straw or cornstover pretreated by steam explosion in classical or acidic conditions, were found nonfermentable into acetone-butanol (ABE). A simple treatment involving heating the hydrolysates in the presence of calcium or magnesium compounds such as $Ca(OH)_2$ or $MgCO_3$ at neutral pH values restored normal fermentability to these hydrolysates. The detoxification treatment could be included in the standard neutralization and **sterilization procedures** performed before fermentation.

L35 ANSWER 34 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1986:9257 BIOSIS
DOCUMENT NUMBER: PREV198630009257; BR30:9257
TITLE: PLASMA LEVELS OF GRANULOCYTE ELASTASE DURING HEMODIALYSIS EFFECTS OF DIFFERENT DIALYZER MEMBRANES AND **STERILIZATION PROCEDURES**.
AUTHOR(S): HOERL W H [Reprint author]; STEINHAUER H B; RIEGEL W; SCHOLLMEYER P
CORPORATE SOURCE: DEPARTMENT OF MEDICINE, UNIVERSITY OF FREIBURG, FRG
SOURCE: Kidney International, (1985) Vol. 28, No. 2, pp. 336.

Meeting Info.: 12TH CONGRESS OF THE EUROPEAN DIALYSIS AND TRANSPLANT ASSOCIATION-EUROPEAN RENAL ASSOCIATION, BRUSSELS, BELGIUM, JUNE 25-29, 1985. KIDNEY INT.
CODEN: KDYIA5. ISSN: 0085-2538.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 25 Apr 1986
Last Updated on STN: 25 Apr 1986

L35 ANSWER 35 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1982:302150 BIOSIS
DOCUMENT NUMBER: PREV198274074630; BA74:74630
TITLE: THE REALIZATION AND VERIFICATION OF HEAT STERILIZATION IN CONSIDERATION OF **LETHALITY** KINETICS OF **MICROORGANISMS.**
AUTHOR(S): MUSIELSKI H [Reprint author]
CORPORATE SOURCE: ABT BIOCHEMIE DES INSTITUTS FUER MIKROBIOLOGIE DES BEREICHS MEDIZIN CHARITE, DDR-1080 BERLIN, CLARA-ZETKIN-STRASSE 96
SOURCE: Deutsche Gesundheitswesen, (1982) Vol. 37, No. 2, pp. 80-85.
CODEN: DEGEA3. ISSN: 0012-0219.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: GERMAN
AB Data on the analysis of the steam sterilization process according to the East German 2nd Pharmacopeia are presented. These investigations are based on the recommended relation between temperature and exposure time. For the given temperature range 110° C-140° C the value of the rate of inactivation is z = 10° C. Methods employed in food technology to analyze steam sterilization processes were used and the sterilization efficiency for surgical fabrics was calculated. Thermoelectric measurements were used in calculating the **lethal** rates in the mentioned materials at critical locations. These data are compared with the inactivation observed for spore strips of **Bacillus stearothermophilus** simultaneously employed as **sterilization indicator.** The experimentally determined inactivation rates of spore strips correctly represent the relation between temperature and exposure time required by the East German 2nd Pharmacopeia.

L35 ANSWER 36 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1979:215028 BIOSIS
DOCUMENT NUMBER: PREV197968017532; BA68:17532
TITLE: SIMULTANEOUS QUANTITATION OF MORPHINE AND PARABEN PRESERVATIVES IN MORPHINE INJECTABLES.
AUTHOR(S): AUSTIN K L [Reprint author]; MATHER L E
CORPORATE SOURCE: DEP ANAESTH INTENS CARE, FLINDERS MED CENT, FLINDERS UNIV S AUST, BEDFORD PARK, S AUST 5042, AUST
SOURCE: Journal of Pharmaceutical Sciences, (1978) Vol. 67, No. 11, pp. 1510-1511.
CODEN: JPMSAE. ISSN: 0022-3549.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB During the assessment of the effects of **sterilization procedures** on drugs used in anesthetic practice, a high-performance liquid chromatographic method for the simultaneous determination of morphine sulfate, methylparaben and propylparaben in morphine sulfate injection was developed. A reversed-phase system, based

on an octadecylsilane stationary phase, was used with a binary solvent mobile phase consisting of methanol-phosphate buffer (pH 4.0) containing methanol (5%) **delivered** at a constant rate (0.6:0.4 ml/min) using a 2-pump system. The detector response at 254 nm was linear with the amount injected over a wide range, allowing rapid and reproducible quantitation of each component.

L35 ANSWER 37 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1978:168690 BIOSIS
DOCUMENT NUMBER: PREV197865055690; BA65:55690
TITLE: EFFECT OF FEEDING IRRADIATED FISH ON THE DRUG METABOLIZING LIVER **ENZYMES** IN RATS.
AUTHOR(S): BENAKIS A [Reprint author]; CORTHAY J; MEDILANSKI P
CORPORATE SOURCE: LAB DRUG METAB, DEP PHARMACOL, UNIV GENEVA, GENEVA, SWITZ
SOURCE: Toxicology and Applied Pharmacology, (1977) Vol. 42, No. 3, pp. 553-560.
CODEN: TXAPA9. ISSN: 0041-008X.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB The activity of drug-metabolizing liver **enzymes** was studied by physiological, biochemical and pharmacological tests in male Wistar rats fed irradiated fish for 3, 7, 21 and 42 days. Animals receiving food containing 45% 200-krad-irradiated fish showed a 20% higher growth rate than control animals. The liver microsomal protein content was 20% higher than in control animals; the cytochrome P-450 concentration was unchanged. The aminopyrine N-demethylating and aniline-hydroxylating activities were slightly decreased. The inhibition of the microsomal **enzymatic** activity was more evident in the pharmacological test. The hexobarbital sleeping time was up to 30-40% longer in animals fed irradiated fish than in control animals. These results are compared to those of a group of 50 ppm DDT-treated rats, which were used as a positive reference for an induction effect. No significant **enzyme** induction effect was observed in rats fed irradiated fish. The inhibition effect observed in the microsomal **enzymes** might lead to a potentiation of the action of certain drugs. [The irradiation of food as a **sterilization procedure** is being used more frequently as a preservation procedure for food.].

L35 ANSWER 38 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1977:117467 BIOSIS
DOCUMENT NUMBER: PREV197763012331; BA63:12331
TITLE: EFFECTS OF FEEDING PROTEIN RECOVERED FROM INDUSTRIAL WASTE WATER ALWA PROTEIN TO GROWING PIGS.
AUTHOR(S): FARSTAD L; KROGSTAD O; LIVEN E; FLATLANDSMO K; NAESS B
SOURCE: Acta Agriculturae Scandinavica, (1976) Vol. 26, No. 2, pp. 119-129.
CODEN: AASCAU. ISSN: 0001-5121.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

AB The suitability and nutritional adequacy of feeding lignosulphonate precipitated proteins from industrial waste waters (Alwa-protein) as a substitute for soybean meal was studied in growing pigs. Half of the soybean meal in the control ration could be replaced by Alwa-protein without any significant negative effects on weight gain, feed efficiency or carcass quality. When Alwa-protein was given in higher concentrations, a significantly lower weight gain, poorer carcass quality and other negative effects on various biological systems were observed. No significant differences, attributable to the diets, were seen for the

various groups on macroscopic and histological examination of different parenchymatous organs. Blood analyses revealed some significant differences between the control group and experimental groups for the biological parameters tested. Bacteriological examination of the Alwa-protein led to the isolation of Salmonella anatum, indicating either inadequate **sterilization procedures** or recontamination during storage or transportation. Bacteriological and **enzymological** examinations of intestinal content revealed no marked differences between the groups.

L35 ANSWER 39 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1975:192035 BIOSIS
DOCUMENT NUMBER: PREV197560022031; BA60:22031
TITLE: CHARACTERIZATION OF BACILLUS-PUMILUS STRAIN E-601 SPORES AFTER SINGLE **SUBLETHAL** GAMMA IRRADIATION TREATMENTS.
AUTHOR(S): PARISI A N; ANTOINE A D
SOURCE: Applied Microbiology, (1975) Vol. 29, No. 1, pp. 34-39. CODEN: APMBAY. ISSN: 0003-6919.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L35 ANSWER 40 OF 46 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1972:18876 BIOSIS
DOCUMENT NUMBER: PREV197208018876; BR08:18876
TITLE: THE RADIO SENSITIVITY OF A BACTERIAL SPORE WHICH **SURVIVES** ALL NORMAL **STERILIZATION PROCEDURES**.
AUTHOR(S): DEWEY D L
SOURCE: British Journal of Radiology, (1971) Vol. 44, No. 523, pp. 565. CODEN: BJRAAP. ISSN: 0007-1285.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L35 ANSWER 41 OF 46 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2001132485 EMBASE
TITLE: [F(o) - Concept in steam sterilisation and the connected sterilisation safety].
F(o) - KONZEPT BEI DAMPFSTERILISATIONS-VERFAHREN UND DAMIT VERBUNDENE STERILISATIONSSICHERHEIT.
AUTHOR: Pfeiffer M.
CORPORATE SOURCE: Dr. M. Pfeiffer, Boehringer Ingelheim Pharm KG (A QS), Binger Str. 173, 55216 Ingelheim/Rhein, Germany
SOURCE: Pharmazeutische Industrie, (2001) 63/3 (291-296).
Refs: 9
ISSN: 0031-711X CODEN: PHINAN
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
039 Pharmacy
LANGUAGE: German
SUMMARY LANGUAGE: English; German
AB The European Pharmacopoeia (Ph.Eur.) [1] requires in chapter 5.1.1 (methods of preparation of sterile products) for steam sterilisation that the products to be sterilized are to be heated at a minimum of 121 °C for 15 min (=reference sterilisation procedure). Other

combinations of time and temperature may be used provided that a sterility assurance level (SAL) of 10(-6) or less will be achieved; guidance concerning validation by means of the F(o)-concept is given. The F(o)-concept is regarded to be an equivalent sterilisation method; these are methods that yield with combinations of temperature and time different from those of the reference **sterilization procedure** comparable **lethal** effects. The equivalent methods have the advantage that sterilisation temperatures of T < 121 °C might be more suitable for temperature labile products and are able to **deliver** comparable **lethal** effects when the necessary sterilisation times are adequately prolonged [2].

L35 ANSWER 42 OF 46 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1998376517 EMBASE

TITLE: [Effects of ETO and steam sterilization on dialysis-induced cytokine release by cuprophan membrane]. STERILIZZAZIONE DEL CUPROPHAN CON VAPORE ED OSSIDO DI ETILENE: RELAZIONE CON LA PRODUZIONE LINFOMONOCITARIA DI CITOCHINE.

AUTHOR: Aucella F.; Vigilante M.; Piemontese M.; Grandone E.; Colaizzo D.; Margaglione M.; Modoni S.G.; Stallone C.

CORPORATE SOURCE: Dr. F. Aucella, Divisione di Nefrologia e Dialisi, Osp. Casa Sollievo della Sofferenza, IRCCS, 71013 San Giovanni Rotondo (FG), Italy

SOURCE: Giornale Italiano di Nefrologia, (1998) 15/5 (249-254). Refs: 17
ISSN: 0393-5590 CODEN: GINEEZ

COUNTRY: Italy

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
027 Biophysics, Bioengineering and Medical Instrumentation
028 Urology and Nephrology

LANGUAGE: Italian

SUMMARY LANGUAGE: English; Italian

AB The side effects of ethilene oxide support the use of steam as the best **sterilization procedure** for medical devices. However, still now the effects of steam on mononuclear cytokine release, if any, are unknown. We enrolled 8 patients on chronic hemodialysis free from neoplastic, allergic or connective diseases, and compared the ETO and steam sterilization of cuprophan membrane (E3 and E3S, 1,3 m2 Fresenius AG). After a 3-month dialysis period with E3, a basal test was set up (A1); the same was performed after one-(B1) and two- (B2) month E3S treatment; finally, the last test was performed one month after the return to E3 (A2). In each test pre- and post dialysis samples were drawn for: LAL-test, to exclude dialysate contamination; IL-1β and TNF-α release after a 24-h incubation of mononuclear cells (MN) (ELISA pg/ml/106 MN); C3a and C5a levels at 0, 5', 15' and 60' to evaluate complement activation. LAL-test showed good quality of the dialysate through the study, and C3a and C5a levels were not different. Spontaneous release of IL-1β and TNF-α by MN was 162 and 826 pg/ml respectively in A1; it showed a clearly increase either in BI and B2 (185 and 226 for IL-1β and 720 and 1970 for TNF-α). The return to E3 showed a decrease in the cytokine release (123 and 689 pg/ml, respectively). Thus, steam sterilization seems to induce a higher cytokine release by MN when a cuprophan membrane is used. Dialysate contamination and a different complement activation being excluded, the only cause of the different cytokine production is the sterilization method. These results underlined

the great complexity of the biological interactions of medical devices.

L35 ANSWER 43 OF 46 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 74156280 EMBASE
DOCUMENT NUMBER: 1974156280
TITLE: Ethylene oxide sterilization.
AUTHOR: Wood M.
CORPORATE SOURCE: United States
SOURCE: RESP.THER., (1974) 4/1 (43-47+75).
CODEN: RSTHBO
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
015 Chest Diseases, Thoracic Surgery and Tuberculosis
024 Anesthesiology
LANGUAGE: English
AB Ethylene oxide (EO) sterilization currently provides the best alternative for items which cannot withstand high temperatures or moisture. EO will **kill** all known **microorganisms** at relatively low temperature, will diffuse through porous packaging, is noncorrosive, and will leave no residue if properly aerated. The major drawbacks to EO are the time required for processing through the sterilization and aeration procedures, the current lack of data on toxicity levels and the initial cost of the equipment. Cold sterilants, when used as an alternative to EO, should be recognized as decontaminants. No matter what **sterilization procedure** is used, methodical culturing should be performed on all equipment, and safeguards against contamination (such as the setting up of separate dirty, clean and sterile rooms) be instigated wherever possible. The future may bring new methods of sterilization, such as gamma irradiation, without the drawbacks of current systems. Combining the best features of all techniques currently in use, and eliminating their disadvantages, such a new system would be a 'dry' system, noncorrosive to all materials and 100% effective against all known **microorganisms** at ambient or low temperatures. It would leave no toxic residue, allow items to be sterilized in their containers of packages and be fast, easy to operate and nonhazardous in any form to personnel and patients.

L35 ANSWER 44 OF 46 JICST-EPlus COPYRIGHT 2003 JST on STN
ACCESSION NUMBER: 920140068 JICST-EPlus
TITLE: New Sterilization Method by Hydrogen Peroxide Low Temperture Plasma.
AUTHOR: FURUHASHI MASAYOSHI; UEDA ISAO
CORPORATE SOURCE: Tokyo Medical and Dental Univ., Faculty of Medicine, Hospital
SOURCE: Ika Kikaigaku (Journal of Japanese Medical Instruments), (1992) vol. 62, no. 1, pp. 18-24. Journal Code: F0706A (Fig. 6, Tbl. 2, Ref. 5)
ISSN: 0385-440X
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Commentary
LANGUAGE: Japanese
STATUS: New
AB The new sterilization studied the performance of hydrogen peroxide(H2O2) low temperature plasma sterilizer (STERRAD), developed in the United States. The sterilization process was as follows: Vacuum process, Injection of 50% H2O2(in a 1 ml ampule), Air diffusion process, Low temperature plasma process, and Recovery to atmospheric pressure, Completion of the process. Following five bacteria were used for the **sterilization test**; Bacillus subtilis globigii, B.

stearothermophilus, B. licheniformis (these bacilli used were spores), Staph. aureus and Aspergillus niger. The results were as follows: When B. subtilis and B. stearothermophilus (spore, on a filter paper chip) were put in a special purpose packaging materials(STERRAD), which were further sealed by heating, they were **killed** by 50 minutes sterilization with the low temperature plasma of hydrogen peroxide. Sterilization process of hydrogen peroxide. Sterillization process of hydrogen peroxide low temperature plasma; Free radicals (hydroxy radical, hydrogen radical, superoxide and hydroperoxy radical) are very reactive and exhibit enough bacteriocidal activity within a short time. **Microorganisms** are possible **killed** by the attack of these active molecules. The method using this equipment has merits that the sterillization can be performed at low temperature (25.DEG. to 30.DEG.C.) and low moisture, and that the procedure is not dangerous, because no toxic compounds are secondarily produced during sterilization. (author abst.)

L35 ANSWER 45 OF 46 JICST-EPlus COPYRIGHT 2003 JST on STN
ACCESSION NUMBER: 920036380 JICST-EPlus
TITLE: Business Annals of the Hiroshima Prefectural Inst. of Public Health.25 In the fiscal year 1990.(Sponsor : Hiroshima Prefectural Inst. of Public Health)
SOURCE: Hiroshimaken Eisei Kenkyujo Gyomu Nenpo, (1991) no. 25(1990), pp. 62P. Journal Code: J0272A
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New
AB An outline of test verification and study research business done in the fiscal year 1990 is given.The report covers the following : 1) transition ; 2) organization and financing ; 3) training, scientific meetings, and lectures ; and 4) business. The outcome of business is presented by divions : **sterilization test** of blood preparations and virus examination of influenza-like diseases and epidemiological research of functional adjustment of pathogen detection information network and information in the biological division ; researchon tsutsugamushi distribution in Hiroshima Prefecture and the number of ticks and quantity of tick antibodies in indoor dust in the pathological division ; research on residual pesticides and heavy metals in foods, capillary analysis of PCB in the blood of Kanemi-yusho patients in the chemical divison ; bacteriologicla survey of the water of oyster culture and oyster poisoning pathogens, residual antibiotics and the occurrence of food poisoning in the food and health division.(1991.10)

L35 ANSWER 46 OF 46 JICST-EPlus COPYRIGHT 2003 JST on STN
ACCESSION NUMBER: 900452011 JICST-EPlus
TITLE: Synergistic effect of ozone and carbon dioxide gases for sterilizing food.
AUTHOR: MITSUDA H; OMINAMI H; YAMAMOTO A
CORPORATE SOURCE: Japan Food Industry Assoc. L.C., Kyoto
SOURCE: Proc Jpn Acad Ser B, (1990) vol. 66, no. 4, pp. 68-72. Journal Code: G0485B (Fig. 1, Tbl. 3) CODEN: PJABDW; ISSN: 0386-2208
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
STATUS: New
AB The synergistic effect of ozone and carbon dioxide gases on the sterilization of food was investigated. Raw beef, fresh cucumber and an agar plate of Escherichia coli were sterilized with a mixture of ozone and carbon dioxide gases in polyvinyl chloride film bags and stored. In both

direct **sterilization tests** and the storage tests, the **survival** percents for the mixed gases of ozone and carbon dioxide were lower than for those of the individual gas. The reasons for this synergistic effect were considered to be that the bacteriocidal effect of ozone gas was retained during storage period by the quenching effect of carbon dioxide gas to the chain reaction of ozone degradation, any by the bacteriostatic effect of carbon dioxide gas. The mixture of ozone and carbon dioxide gases sterilized both the surface and the inside of the food and the agar plate at the same time. (author abst.)

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=> d his ful

     FILE 'REGISTRY' ENTERED AT 14:14:32 ON 17 DEC 2003
                  E DECAGLYCERYL MONOSTEARATE/CN
L1             1 SEA ABB=ON  "DECAGLYCERYL MONOSTEARATE"/CN
                  E HEXAGLYCERYL MONOSTEARATE/CN
L2             1 SEA ABB=ON  "HEXAGLYCERYL MONOSTEARATE"/CN
                  E TETRAGLYCERYL MONOSTEARATE/CN
L3             1 SEA ABB=ON  "TETRAGLYCERYL MONOSTEARATE"/CN
                  E HEXAGLYCERYL POLYRICINOLATE/CN
                  E DECAGLYCERYL MONOLAURATE/CN
L4             1 SEA ABB=ON  "DECAGLYCERYL MONOLAURATE"/CN
                  E TETRAGLYCERYL MONOLAURATE/CN
L5             1 SEA ABB=ON  "TETRAGLYCERYL MONOLAURATE"/CN
                  E DECAGLYCERYL DIPALMITATE/CN
L6             1 SEA ABB=ON  "DECAGLYCERYL DIPALMITATE"/CN
                  E HEXAGLYCERYL DISTEARATE/CN
L7             1 SEA ABB=ON  "HEXAGLYCERYL DISTEARATE"/CN
                  E DECAGLYCERYL MONOOLEATE/CN
L8             1 SEA ABB=ON  "DECAGLYCERYL MONOOLEATE"/CN
                  E DECAGLYCERYL MONOMYRISTATE/CN
L9             1 SEA ABB=ON  "DECAGLYCERYL MONOMYRISTATE"/CN
                  E DECAGLYCERYL MONOISOSTEARATE/CN
L10            1 SEA ABB=ON  "DECAGLYCERYL MONOISOSTEARATE"/CN
                  E DECAGLYCERYL DIISOSTEARATE/CN
L11            1 SEA ABB=ON  "DECAGLYCERYL DIISOSTEARATE"/CN
                  E GLYCERETH-7-DIISONONANOATE/CN
                  E POLYOXYETHYLENE-5-GLYCERYL MONOSTEARATE/CN
                  E POLYOXYETHYLENE GLYCERYL MONOSTEARATE/CN
L12            1 SEA ABB=ON  "POLYOXYETHYLENE GLYCERYL MONOSTEARATE"/CN
                  E DECAGLYCEROL/CN
L13            1 SEA ABB=ON  DECAGLYCEROL/CN

     FILE 'HCAPLUS' ENTERED AT 14:18:36 ON 17 DEC 2003
L14          402 SEA ABB=ON  ?STERILIZATION?(W)(?INDICAT? OR ?TEST? OR ?PROCEDUR
                 ?)
L15            1 SEA ABB=ON  L14 AND ?MICROORG?(W)(?SURVIV? OR ?KILL? OR ?LIVE?
                 OR ?LETHAL?)

     FILE 'REGISTRY' ENTERED AT 14:19:36 ON 17 DEC 2003
                  E BACILLUS STEAROTHERMOPHILUS/CN
L16            1 SEA ABB=ON  "BACILLUS STEAROTHERMOPHILUS"/CN

     FILE 'HCAPLUS' ENTERED AT 14:19:51 ON 17 DEC 2003
L17           35 SEA ABB=ON  L14 AND (?MICROORG? OR L16 OR ?BACILLUS?(W)?STEAROT
                 HERMOPHILUS?)
L18           14 SEA ABB=ON  L17 AND (?LETHAL? OR ?KILL? OR ?LIVE? OR ?SURVIV?)
L19            0 SEA ABB=ON  L18 AND ?HYDROPHOBIC?

     FILE 'REGISTRY' ENTERED AT 14:22:22 ON 17 DEC 2003
L20           11 SEA ABB=ON  L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8 OR L9
                 OR L10 OR L11

     FILE 'HCAPLUS' ENTERED AT 14:22:45 ON 17 DEC 2003
L21         4908 SEA ABB=ON  L20 OR ?GLYCERYL?(W)(?STEARAT? OR ?POLYRICINOLAT?
                 OR ?LAURAT? OR ?PALMITAT? OR ?OLEAT? OR ?MYRISTAT?)
L22            1 SEA ABB=ON  L14 AND L21
L23            0 SEA ABB=ON  L14 AND (L12 OR L13 OR ?GLYCERETH?(2W)?DIISONONANOA
                 T? OR ?POLYOXYETHYLEN?(2W)?GLYCERYL?(W)?STEARAT? OR ?DECAGLYCER
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                OL?)
L24          15 SEA ABB=ON  L15 OR L18 OR L22 OR L23
L25           1 SEA ABB=ON  L14 AND ?ENZYM?(W)?ACTIV?
L26          16 SEA ABB=ON  L14 AND ?ENZYM?
L27          31 SEA ABB=ON  L24 OR L26
L28           1 SEA ABB=ON  L27 AND ?MONITOR?(3A)?EFFECTIV?
L29          31 SEA ABB=ON  L27 OR L28 31 hits from CA Plus

     FILE 'MEDLINE, BIOSIS, EMBASE, JICST-EPLUS, JAPIO' ENTERED AT 14:32:13 ON
     17 DEC 2003
L30          64 SEA ABB=ON  L29
L31          46 DUP REMOV L30 (18 DUPLICATES REMOVED)
L32           0 SEA ABB=ON  L31 AND HYDROPHOB?
L33           0 SEA ABB=ON  L31 AND (GLYCERETH?(2W) DIISONONANOAT? OR POLYOXYET
                HYLEN?(2W) GLYCERYL?(W) STEARAT? OR DECAGLYCEROL?)
L34           1 SEA ABB=ON  L31 AND GLYCEROL?
L35          46 SEA ABB=ON  L31 OR L34 46 hits from other d.b.'s
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- with apologies to you + the trees for all this paper!

MJ